Funding Request Form

Allocation Period 2020-2022

Full Review

Summary Information

Country(s)	Zambia
Component(s)	HIV/TB and RSSH
Planned grant(s) start date(s)	January 2021
Planned grant(s) end date(s)	December 2923
Principal Recipient(s)	Ministry of Health and Christian Health Association of Zambia
Currency	US$
Allocation Funding Request Amount	250,113,537
Prioritized Above Allocation Request (PAAR) Amount[1]	80,067,239
Matching Funds Request Amount[2]	12,300,000

The Global Fund

[1] PAARs can only be submitted with the Funding Request. To complete a PAAR, fill-in the Excel template that you will receive from the Global Fund Secretariat.
[2]This is only relevant for applicants with designated matching funds as indicated in the allocation letter.

Section 1: Context Related to the Funding Request

1.1 Key References on Country Context

Below is a list key reference documents referred to in this funding request that provide the country's contextual cross-cutting and disease-specific information.

Reference document	Link/ Attachment reference	Relevant section(s) and/or page(s)
National Aids Strategic Framework 2020, MTR	https://tinyurl.com/y8en3bgl	Page 29
Revised National HIV and AIDS Strategic Framework 2020 - 2023	https://tinyurl.com/y9s4x48b	Entire Document
Zambia National Condom Strategy 2020-2025	https://tinyurl.com/y7en3aof	page 6
Zambia Demographic and Health Survey, 2001	https://tinyurl.com/yc4yy7hm	Page 195
HIV testing services guidelines 2016	https://tinyurl.com/y8j2dy2j	*Pages 8-12*
PEPFAR Interagency 'Finding Men' Consultation in Zambia report	https://tinyurl.com/y9j4rbl5	*Pages 5,16, 22, 23, 24*
Assessing Civic Engagement Trends in Zambia, Lusaka: Zambia Council for Social Development (ZCSD). Mumba, M. H. & Mumba, P. R., 2010.	https://tinyurl.com/yaw6gt3x	Page 4-6
The Status of Civil Society in Zambia: Challenges and Future Prospects, Lusaka: Zambia Council for Social Development (ZCSD); World Alliance for Civic Participation (CIVICUS). ZSCD; CIVICUS, 2010.	https://tinyurl.com/y9zmb7aj	Pages 10-13; 18;24, 44
Paediatric and Adolescent HIV Change Package Revised Paediatric HIV Change Package To Attain The 95-95-95 Goals For Children And Adolescents	https://tinyurl.com/y7rq2u5v	Entire document
National Policy on Elimination of Mother to Child Transmission of HIV and Syphillis Operational Plan, 2019.	https://tinyurl.com/ybdd2e92	Pages 7, Pg. 29, 20-25
Towards an AIDS free generation: Is stigma still an issue in Zambia? Results from a legal environment assessment of the HIV/AIDS/TB program of the Churches Health Association of Zambia, Biemba et al 2019	https://tinyurl.com/yd27y7t5	Entire document
Tracking Progress Toward Elimination of Mother to Child Transmission of HIV in Zambia: Findings from the Early Infant Diagnosis of HIV Program (2009 -2017); Long turnaround time (TAT) affecting clinical decisions. Mutanga et al 2019	https://tinyurl.com/yc3gaqo5	Pages 65
UNAIDS County Report ,2018	https://tinyurl.com/yce794ku	Entire document
Promising Practices in Increasing Male Engagement in the HIV Response and Reducing the Burden of HIV on Women and Girls in Eastern and Southern Africa (ESA).	https://tinyurl.com/ybtxheur	Pages 5,.7, 9,13, and section 3
Community-based Intervention to Increase HIV Testing and Case Detection in People Aged 16-32 Years in Tanzania, Zimbabwe, and Thailand	https://tinyurl.com/yc57rpyj	Entire document
A community-based intervention to reduce HIV incidence in populations at risk for HIV in sub-Saharan Africa and Thailand. Fritz K, et al.	https://tinyurl.com/y9t3qt46	Pages 422-431
National Alcohol Policy Implementation Plan, 2018	https://tinyurl.com/yawj78kx	Entire document
Ministry of Health, National Biomedical Laboratory Strategic Plan 2018 – 2021	https://tinyurl.com/yc5e5yo3	Page 12
Concept Note: Establishment of the Medical Laboratory Quality Assurance Coordinating Unit 2020	https://tinyurl.com/ydxztwjh	Page 4 and 6

Ministry of Health: Zambia National Quality Assurance Programme - National HIV Proficiency Testing Programme Cycle Report, 2019,	https://tinyurl.com/y82nhxom	Page 8
NATIONAL HIV PROFICIENCY TESTING PROGRAMME CYCLE – PT013 REPORT	https://tinyurl.com/ydh6nwy4	All document
Zambia: National Annual Quantification Report for HIV test Kits and priority laboratory 2018, Shibemba, A et.al, 2018	https://tinyurl.com/y82nhxom	Page 9
National Operational Plan for the scale up of voluntary Medical Male Circumcision (VMMC) in Zambia (2016-2020). Lusaka, Zambia.	https://tinyurl.com/yaxk84mx	Page 3
Transitional and sustainability plan for the Zambia voluntary Medical Male Circumcision (VMMC) Program. 2019. Lusaka, Zambia.	https://tinyurl.com/y8mr524s	Page 9,11,27
Guidelines on Quality Improvement on voluntary Medical Male Circumcision (VMMC) service delivery in Zambia. 2019.	https://tinyurl.com/y6wtxsgh	Page 1,2
National Social Behavior Change Communication strategy for Voluntary Medical Male Circumcision (VMMC). 2019. Lusaka, Zambia.	https://tinyurl.com/y7ktdxo3	Page 17
Adolescent Health Strategy 2017-2021	https://tinyurl.com/yaso9c67	Pages 39, 40 & 55
National Operational Plan for the Adolescent Health Strategy 2017-2021	https://tinyurl.com/ycfbuv9k	Pages 19, 27-29
Zambia Demographic and Health Survey 2018	https://tinyurl.com/yawhudce	Pages 63-64, 73-78, 99-105, 223-228, 231-248,250, 259-264, 311-319, *Pages 4, 227-228, 233, 259-264,* 231,108, 226, 231, 242,
Violence Against Children in Zambia Survey Report of 2014	https://tinyurl.com/y9c4tpls	Pages 17-27
2015 Living Conditions Monitoring Survey Report, Zambia Central Statistical Office	https://tinyurl.com/y82a8ubr	Pages 104-105
Zambia Educational Statistical Bulletin 2018	https://tinyurl.com/y8g36e89	Pages 45-53
National AIDS Strategic Framework (NASF) 2017 -2021	https://tinyurl.com/yat36upp	Page 53, Pages 19, 20, 37, 38, 46, 52, 53, 54, 56
PMTCT national evaluation report, 2018	https://tinyurl.com/yb6akhr5	Entire document
PMTCT Stacked Bar Analysis, 2019	https://tinyurl.com/y9dntstt	Entire document
Zambia Steps Survey on Non-Communicable Disease Risk, 2017	https://tinyurl.com/yd6edeqa	Entire document
PEPFAR COP report, 2020	https://tinyurl.com/ybnlkxrq	Entire document
Zambia Legal Environment Assessment for HIV, TB and Sexual and Reproductive Health and Rights, 2019	https://tinyurl.com/ybjn755q	Entire document
Underreporting of TB Patients in Zambia December 2019 Report for The National Tuberculosis and Leprosy Programme (NTLP)	https://tinyurl.com/ycxbjrtu	Entire document
Tuberculosis in the mines of Zambia: A case for intervention, Kapata et.al. 2016	https://tinyurl.com/ybnggdpe	Entire document
Global TB Report, 2019	https://tinyurl.com/yansu5t3	Entire document
National TB Report, 2018	https://tinyurl.com/yasysv2s	Entire document
Community Health Strategy, 2017-2021	https://tinyurl.com/ybkfvyvj	Entire document

Health Sector Supply Chain Strategy and Implementation Plan 2019 – 2021	https://tinyurl.com/y79ra5mg	Entire document
Zambia Consolidated Guidelines for Treatment and Prevention of HIV Infections, 2020	https://tinyurl.com/yasscago	pages 2 to 8 Pages 16-17, 24
Zambia Population Based HIV Impact Assessment, 2016	https://tinyurl.com/y9v795fk	Pages 4, 77, 104, 124
Economic cost analysis of door to door community based distribution of HIV self-test kits in Malawi, Zambia and Zimbabwe. Mangenah, C. et.al., 2019	https://tinyurl.com/y849sw5a	Entire document
Epidemiological Review of Tuberculosis in Zambia, 2020	https://tinyurl.com/ych9ea2w	Entire document
Zambia TB NOP and NOP Costing 2017 - 2021_11 April 2017_Final	https://tinyurl.com/y8p2ow4y	Entire document
Independent review of the TB and Leprosy Programmes of Zambia	https://tinyurl.com/y9twco5h	Entire document
AFRO/GLC Monitoring Mission Report, 2019	https://tinyurl.com/y9wl8ab5	Entire document
Stop Tb Partnership Technical Assistance Mission Report, 2020	https://tinyurl.com/ybfc4r2p	Entire document
ZDHS 2013-2014	https://tinyurl.com/ybag9594	Entire document
National Strategic Plan for TB Prevention, Care, Control 2017 - 2021	https://tinyurl.com/y9c7t8cj	Entire document
National Heath Strategic Plan Monitoring and Evaluation Framework 2017 - 2021	https://tinyurl.com/ya8pronb	Entire document
E-health Strategic Plan 2017 - 2021	https://tinyurl.com/yawbbrr	Entire document
Zambia National Health Accounts 2013−2016 Estimates	https://tinyurl.com/y8xtmxra	Entire document
Zambia Educational Statistical Bulletin 2016	https://tinyurl.com/y7bl3x4z	Entire document
DREAMS Fact Sheet 2019	https://tinyurl.com/y9wsbjja	Entire document
Country Profile - Zambia - Final Draft (v3 - clean) (16 June 2020)	https://tinyurl.com/y6wo2lcv	Entire document
HIV Testing and Counselling Implementation Plan 2014 - 2016	https://tinyurl.com/y8w3cohx	Entire document
Key Populations Formative Assessment Findings Final 2019	https://tinyurl.com/y749ep4y	Entire document
TIME MODELLING APPLICATION: FINAL REPORT 2020	https://tinyurl.com/yc9ow7tf	Entire document
Zambia National Health Strategic Plan-2017-2021	https://tinyurl.com/y8hy97g6	Entire document
PEPFAR Zambia Country Operational Plan (COP/ROP) 2019 Strategic Direction Summary	https://tinyurl.com/ydatdaz3	Entire document
Zambia IBBS Report 2018	https://tinyurl.com/ycv2ukje	Entire document
GAM Online Reporting Tool Zambia - 2019	https://tinyurl.com/yacl6afm	Entire document
Zambia Country Profile 2020	https://tinyurl.com/y6wo2lcv	Entire document
Zambia country visit summary and baseline calibration report, Lusaka - 25th to 29th November 2019	https://tinyurl.com/ydh8pyhf	Entire document
Economic cost analysis of door-to-door community-based distribution of HIV self-test kits in Malawi, Zambia and Zimbabwe	https://tinyurl.com/y849sw5a	Entire document
HIV Proficiency Test PT013 Final Report,	https://tinyurl.com/ydh6nwy4	Entire document

Independent Review of the TB and Leprosy Programs of Zambia Report 2020	https://tinyurl.com/y8zpsgu3	Entire document
New heterosexually transmitted HIV infections in married or cohabiting couples in urban Zambia and Rwanda - Dunke	https://tinyurl.com/y99h4nw2	Entire document
Sub National Estimates District level 2019	https://tinyurl.com/y8ggwgy7	Entire document
Sub National Estimates Final Report	https://tinyurl.com/y74guwvu	Entire document
Zambia TIME Modelling Application, To inform Global Fund Funding Request 2020	https://tinyurl.com/ybz5whev	Entire document
Final_NASA_Report 2015-2017	https://tinyurl.com/ycuadcro	Entire document

1.2 Summary of Country Context

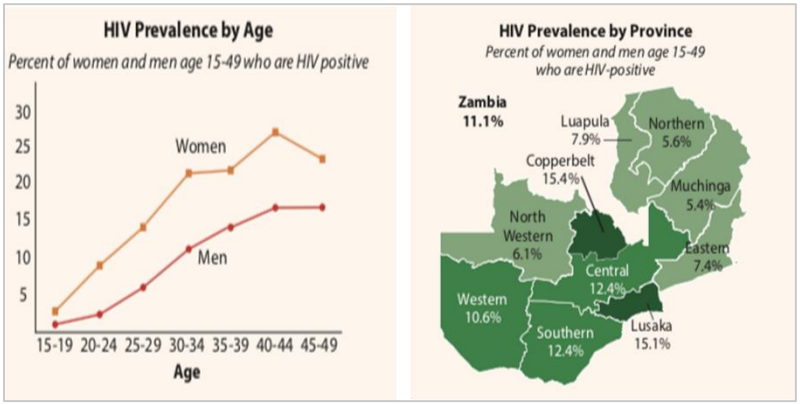
This section outlines the key contextual issues that informed the development of the this funding request.

Overview of the HIV epidemic in Zambia

HIV prevalence

Zambia's population in 2019 was estimated at 17,4 million people (49.5% male, 50.5% female; 56.9% rural, 43.1% urban[3]). HIV prevalence in Zambia has been declining, from 15.6% in 2001 to 11.1% in 2018. Prevalence among women 15-49 years is almost twice that of men (14.2% vs 7.5% respectively). At subnational level, two provinces have the highest HIV prevalence of over 15% as shown in figure 1[4]. HIV prevalence among children under 15 years is estimated at 0.7%[5] while prevalence is estimated at 5.6% and 1.8% among females and males 15-24 years respectively. Prevalence among female sex workers (FSWs) ranges between 45.9% and 50% while for men who have sex with men (MSM), it ranges from 5.1% to 22.0%[6].

Figure 1: HIV prevalence by gender (left) and HIV prevalence by province (rights)

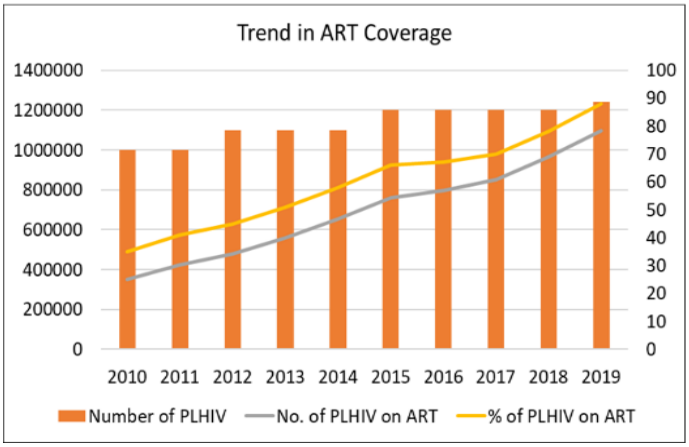


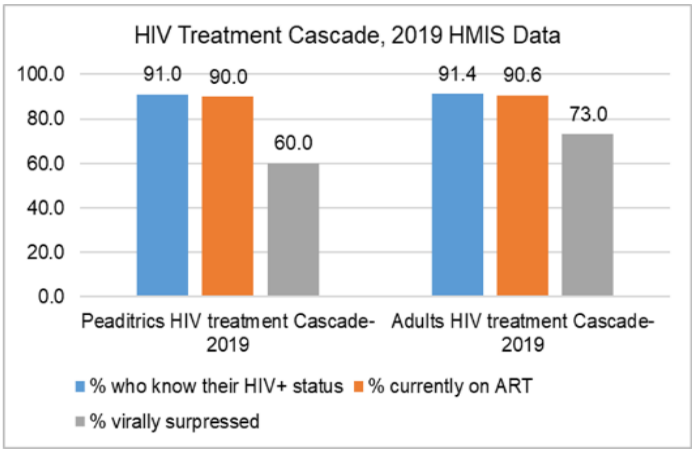
An estimated 1,296,903 people are living with HIV (PLHIV) of which 60% are women[7]. 92% of PLHIV know their status, 87% are on ART, and 76% are estimated to be virally suppressed. ART coverage for males 25 years and older is 79% compared to 89% coverage among women of the same age[8]. Males 20-34 and females 15-24 years as well as children 0-14 years have low ART coverage. Secondly, the two provinces with the highest HIV burden (Copperbelt and Lusaka) have the highest gaps in ART coverage. Having consistently increased ART coverage since 2010, Zambia faces the challenge of sustaining the number of PLHIV on ART by ensuring continuous availability of quality drugs, improving the quality of treatment and care and addressing emerging co-morbidities such as non-communicable diseases (NCDs). Comprehensive data on ART coverage among key populations (FSWs and MSM) is not available. There is a need to strengthen data systems to track the treatment cascade among key populations.

[3] 2010 Population and Housing census report
[4] Zambia Demographic and Health Survey, 2018
[5] Spectrum, 2019
[6] Zambia Global AIDS Monitoring Report, 2019
[7] Spectrum 2019
[8] Zambia Demographic and Health Survey, 2018

Low coverage of viral testing and significant loss to follow up (LFTU) among PLHIV remain key challenges

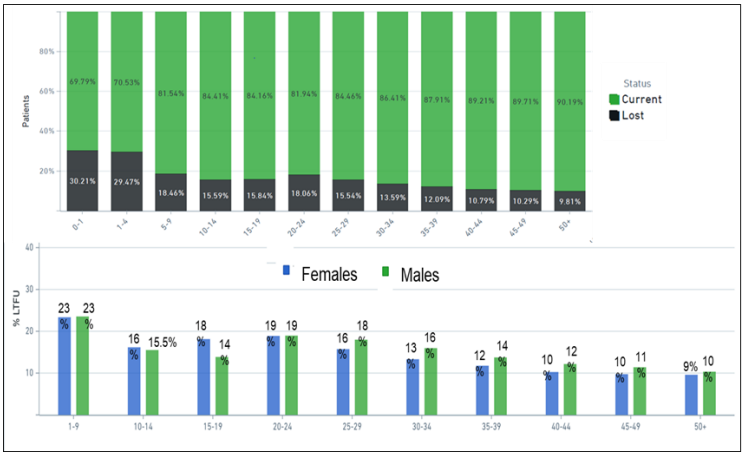
Figure 2: Trend in HIV ART coverage 2010-2019 (Left) and HIV treatment cascade (2019) – HMIS data

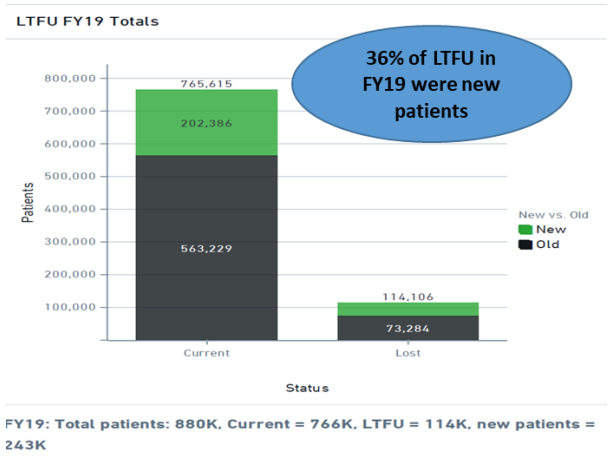




in achieving viral suppression targets in Zambia. Although viral load testing has been scaled up from 47% in 2018 to 74% in quarter 1 of 2020, significant gaps remain especially in VL testing among children 0-14 years, adolescents and young people and men; and long Turn Around Time (TAT) for VL test results persists. Retention of PLHIV in care is around 90% at 12 months from initiations[9]. Greater concern is in the 0-9 children and 20-29 adults whole have higher rates of LFTU as shown in the figure below. In 2019, LFTU rates were higher among new initiations, estimated at 36 %. This funding request will support a scale up of VL testing and interventions to reduce LTFU.

Figure 3: Loss to follow up rate among females and males, 2019[10]





Spectrum 2019 estimates annual HIV mortality to be about 21,000. Majority of these deaths are due to a combination of Tuberculosis, Cryptococcal meningitis and severe bacterial infection. Even though the test and treat strategy has been rollout, 17.7% of persons present to care in at initiation with a CD4 cell count below 200 cells/uL which signified advanced HIV disease (ZamPHIA2016) and 30% of all PLHIV on ART have a CD4 cell count below 200 cells/uL. Men are 1.3 times more likely to present with advanced HIV and the age group 30-49yrs old are more affected. Even though it is not criteria for ART commencement, CD4 cell count has been retained in the Zambian HIV guidelines to identify the patients with Advanced HIV disease and a package of care including LAM test, CrAg testing and cotrimoxazole prophylaxis are provided to those with severe inmmunosuppression. The HIV program intends to scale centers of excellences for the management and training in advanced HIV diseases in this funding cycle.

STIs prevalence is not reducing either, as prevalence among men increased from 6% in 2014 to 8% in 2018[11]. The prevalence of Hepatitis B viral infection also remains high at 7.1 % in PLHIV and 10.2 % among men living with HIV. With a background prevalence rate of hypertension and diabetes mellitus of 30% and 5 % respectively, NCDs are emerging to be an important cause of mortality among PLHIV. This funding request

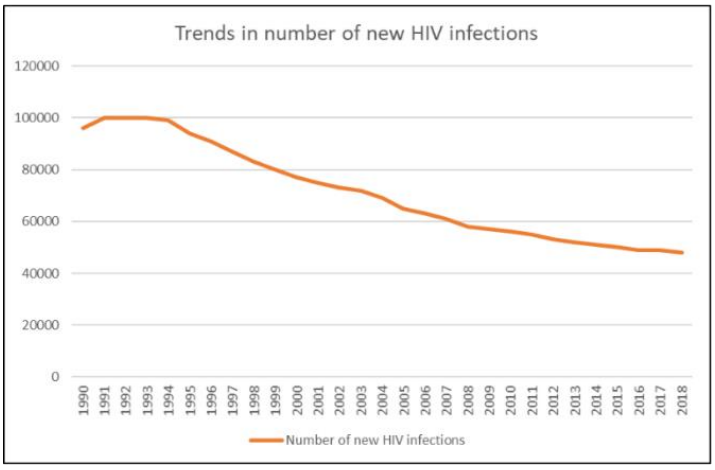
[9] Ministry of Health, Progress Report
[10] COP 2020 Outbrief, Zambia
[11] Zambia Demographic Health Survey, 2014 and 2018

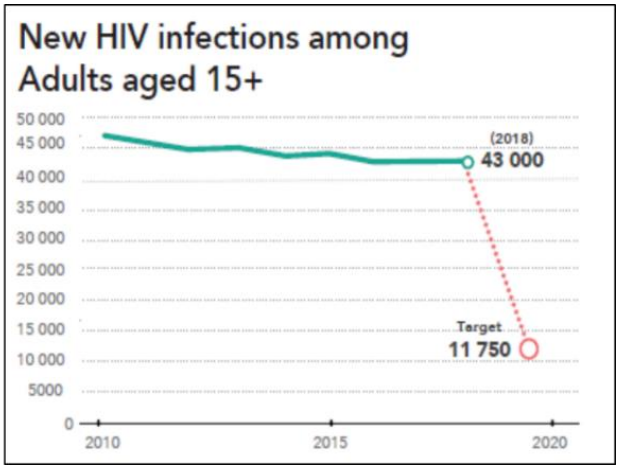
therefore supports the improvement of the quality of care among PLHIV especially those with advanced HIV and comorbidities.

HIV Incidence and prevention new infections

New HIV infections in Zambia declined from a high of 100,000 per year in 1990s to an estimated 43,000 in 2018. Between 2010 and 2018, total new infections declined by 23% while new infections among adults 15+ years declined by 9% and by 10% among young women 12-24 years. There is a great variation in progress towards the 75% target decline in new infections between and within developing countries like Zambia. Zambia has been rated as 'Walking' with a decline of between 14% and 26%. This rate of decline is not fast enough to put the country on track to achieving the 2030 targets as shown in the figure below.

Figure 4: Trend in reduction of new HIV infections (Left) and reduction of HIV infections vs 2020 target (right) – Spectrum 2019





HIV incidence is higher among females (1.02%) than males (0.32%) in all age groups. The variation in incidence between females and males is most pronounced in age group 15-24 with females having more than tenfold the incidence of males. Incidence among females is highest among those aged 25-29 years. The figure below further shows that incidence peaks rapidly among males 25 years and older. This funding request integrates prevention interventions for women aged 25-29 years in various modules.

The country has made significant effort in the prevention of HIV among infants. The MTCT rate at 2 months is estimated at 3.2% while this rate increases to 10% at 18 months[12]. Modelled estimates on new infections among children[13] show that new infections occur during pregnancy and breastfeeding stages due to treatment default among pregnant and breastfeeding women LHIV and sero-conversion during pregnancy and breastfeeding period. There are heterogeneities in maternal treatment coverage among WLHIV with 20 district identified as low PMTCT performing while 12 districts have low (less than 62%) EID coverage at 8 weeks. Only 74% of HIV exposed infants receive EID at 8 weeks[14]. This funding request will address the factors accounting for MTCT rate and inequalities in PMTCT service coverage.

Geographical disparities in new HIV infections exist. Of the total 18,486 new infections among adolescents and young people 15-24 years, 80% (14,800) occur in 40 districts. These districts will be prioritized for implementation of a package of prevention interventions at scale while prevention activities will still be maintained in other districts.

Key factors accounting for AGYW vulnerability to HIV infection include low age of sex debut with 17% of women reporting having had first sex at age 15, 69% at age 18 and 95% at age 25. Women in rural areas have sex debut 1.1 years earlier than those in urban areas and age of sex debut increases with increasing education and wealth quintile. Teenage pregnancy is also significant among AGYW. The percentage of women beginning child bearing increases with age from 6% for those aged 15 to 53% among those aged 19 years. On average, 29% of adolescents 15-19 years have begun childbearing with highest rates of over 30% recorded in Southern, Eastern, North Western and Central provinces. There has been minimal reduction in pregnancy since 2001 which calls for innovative interventions.

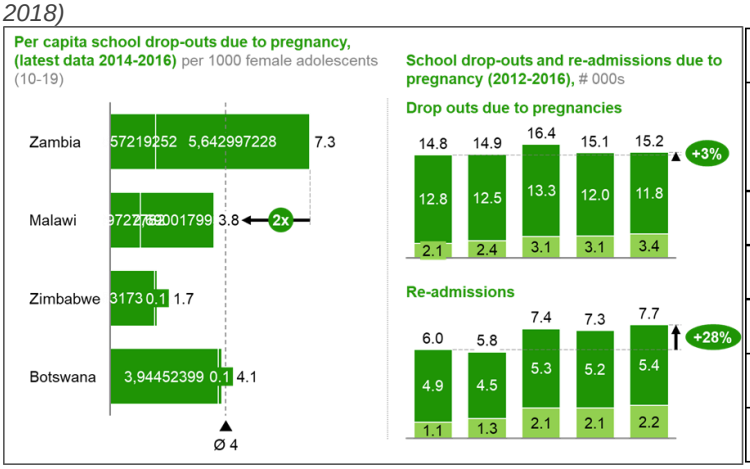
[12] PMTCT national evaluation report, 2018
[13] PMTCT Stacked Bar Analysis, 2019
[14] Healthy Management Information System (HMIS)

Table 1:Trend in Teenage Pregnancy (Source ZDHS 2001, 2007, 2014 & 2018)

Province	2001	2007	2014	2018
Central	32.3	29.3	29.9	30.6
Copperbelt	26.4	20.1	16.3	21.0
Eastern	35.4	29.7	35.4	39.5
Luapula	36.5	32.1	27.9	29.0
Lusaka	28.9	20.8	23.8	14.9
Muchinga			29.6	29.3
Northern	30.6	26.6	30.0	25.9
North Western	33.3	37.3	41.0	35.7
Southern	31.9	35.9	36.0	42.5
Western	39.7	43.6	40.4	41.2
Total	**31.6**	**27.9**	**28.5**	**29.2**

Further, keeping girls in school has an insulating effect against HIV infection. However, Zambia has the highest rates of drop-outs compared to neighbouring countries. Drop out due to pregnancy is highest among primary school students as shown in figure 6. Comprehensive knowledge of HIV has also not made significant improvement despite several years of Behaviour Change Communication and Comprehensive Sexuality Education (CSE) interventions[15]. This funding request seeks to modify these interventions to improve their effectiveness.

Figure 5: School drop-out in Zambia compared to neighboring countries[16] and knowledge of HIV among people 15-49 years (ZDHS 2018)



Trend in comprehensive knowledge of HIV by age						
Age group	Women (%)			Men (%)		
	2007	2013/14	2018	2007	2013/14	2018
15-19	32.3	38.9	40.5	35.0	42.3	38.6
20-24	36.0	44.7	44.9	39.5	53.0	43.2
25-29	37.7	41.3	48.8	39.5	48.6	47.1
30-29	37.7	45.0	48.3	40.7	51.3	50.4
40-49	35.5	41.0	45.4	39.8	51.1	50.8

Other factors determining new HIV infections in Zambia include the practice of risky sexual behaviour. Condom use with non-regular partner is estimated at 53.1% among males 15-49 years and 49.9% among females of the same age. Condom use among females 15-24 years reduced from 38% in 2007 to 33.7% in 2018 while it increased marginally among males of the same age, from 47.6% in 2007 to 49.1% in 2018. Condom use among female sex workers with paying clients is estimated at 78.5% and 38.4% with non-paying clients[17]. Data for MSM use of condoms is not available except the UNAIDS regional proxy data showing 55% condom use among this population. As shown in the table below, there has been no significant variations in condom use across the country since 2001, despite an increase in condom distributed over this period. This funding request supports strengthening of condom supply to community level and a scale up of demand creation interventions among others.

Table 2 Trend of condom use with non-regular partners aged 15-49 years

	2001-2		2007		2013-14		2018	
	Female	Male	Female	Male	Women	Men	Female	Male
Central	26.6	44.8	33.3	60.5		28.8	27.4	50.5
Copperbelt	41.3	52.8	42.1	43.4	28.4	31.8	38.3	51.4
Eastern	34.7	54.7	36.7	51.6	22.9	28.7	40.4	60.0

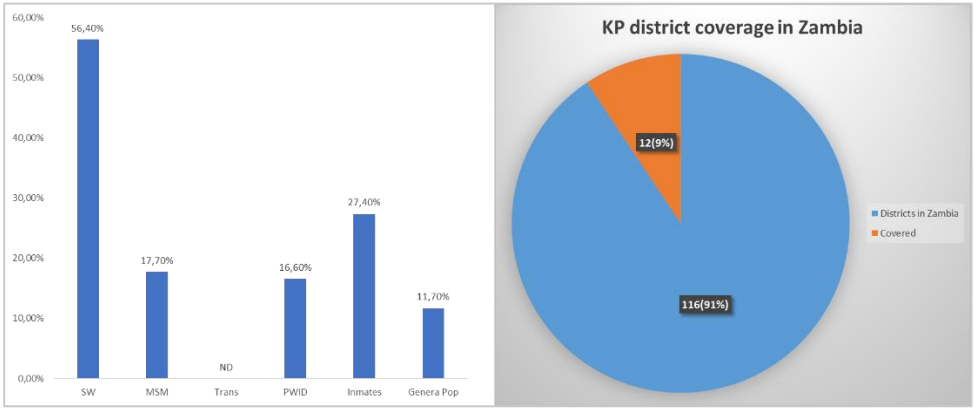
[15] Zambia Demographic and Health Surveys, 2001/02, 2007. 2013/14 and 2018
[16] Step-change in the health and wellbeing of Zambia adolescents using adaptive leadership Report, March 2019
[17] Zambia Demographic and Health Surveys, 2001/02, 2007. 2013/14 and 2018

Luapula	16.7	18.9	27	31.1	16.4	15.2	29.2	45.4
Lusaka	50.4	55.6	49.6	63.2		43	47.2	58.1
Muchinga						20.4	26.7	50.4
Northern	22.4	47.1	32.6	35.1		15.2	34.8	48.5
North-Western	46.8	40	24.3	42.2		22.2	27.4	51.6
Southern	30.9	33.7	35.5	50.1	26.2	23.2	22.8	53.4
Western	14.5	23.3	30.8	41.3		39.8	25	48.2
Total 15-49			37.4	50	29.7	29	34.5	53.5
50-59				46.2		9.1		36
Total 15-59	33.1	44.1		49.9		27.4		53.1
Data source: Zambia Demographic Heath Survey 2001/2, 2007, 2013/14 and 2018								

Key populations

Zambia identifies FSW and their clients, MSM, People who Inject Drugs (PWID), Transgender People (TG) and Inmates as key populations. Indicative data form John Hopkins modelling shows that population estimates are 68,044 MSMs, 133,566 FSWs, 26,840 PWID[18]. However, a comprehensive key population (KP) size estimation survey is needed to support programming and provide provincial level estimates. The key populations are at higher risk of HIV exposure, are subjected to stigma and discrimination, violence and fear, harassment and have limited access to health services. Interventions for KPs are only concentrated in along the transport corridor, border towns and tourist capital. Services provided to KPs include HTS, ART, STI screening and treatment, condoms and lubricant distribution and PrEP but a service package for each type of KP has not been defined. Zambia has conducted Legal Environment Assessments to address, human rights and legal barriers to services. These have been supported by various partners including UNDP and the Global Fund.

Figure 6: Comparison of HIV Prevalence among KPs and General Population(Left) and KP Programme coverage - (Right) - Source RSNASF,2020



Gender and human rights

The gender differences inherent in the health-seeking behaviors of men and women, and the historical gender-specific efforts in HIV-related public health campaigns in this region, impact health outcomes, including mortality. Yet, efforts to understand men's health-seeking behavior are poorly understood in the AIDS epidemic and encouraging men to get tested and treated is a major challenge, but one that is poorly recognized.

In Africa, the focus of the epidemic has historically been on women and children. Women are particularly vulnerable to HIV infection in this setting because of biological factors, their reduced sexual autonomy, and men's sexual power and privilege over them. This understanding has led HIV/AIDS public health prevention and treatment campaigns to focus on women and children in this setting. As a result, men have received considerably less attention in the epidemic and receive less targeted HIV prevention and treatment programs.

In sub-Saharan Africa, despite making up just 10% of the population, one out of every five new HIV infections happens among adolescent girls and young women. In the worse-affected countries, 80% of new HIV infections among adolescents are among girls, who are up to eight times more likely to be living with HIV

[18] PEPFAR COP report, 2020

than adolescent boys. In East and Southern Africa young women will acquire HIV five to seven years earlier than their male peers. Additionally, seven young women become newly infected with HIV for every three young men.

The fact that adolescent girls and young women are substantially affected by the HIV epidemic is partially due to gender roles prevalent in society, to social norms that affect them, and to their limited access to education and resources, all of which prevent adolescent girls and young women from making essential decisions about their health and lives. Harmful laws and practices in relation to early marriage, early pregnancy, and lack of access to confidential sexual and reproductive health services prevent adolescent girls and young women from obtaining essential HIV prevention information and services. Respect for adolescent autonomy and decision-making, providing empowerment, and changing gender norms and laws can enhance access to—and ability to use— HIV prevention services

Gender and human rights barriers to service delivery impact on the achievement of HIV outcomes in Zambia. Data from ZDHS 2018 shows more than one-third (36%) of women age 15-49 have experienced physical violence at least once since age 15; 47% of ever-married women have experienced physical, sexual, or emotional violence by their current or most recent husband or partner (Intimate Partner Violence) while more than half (52%) never sought help and never told anyone about the violence they experienced. Of those seeking help, majority, 62.5%, sought help from a family member, 44.6% from the partner's family and less than 5% sought help through the justice system. Gender Based Violence (GBV) is ingrained in cultural norms and practices given that 46% of women and 26% of men 15-49 years agree that a husband is justified in beating his wife for at least one specified reason[19]. This funding request has embedded interventions to address gender issues across programmatic areas in addition to having specific interventions addressing GBV.

Societal gender norms around masculinity, femininity and the social acceptability of concurrent relations contribute to generating larger sexual networks. Cultural concepts of masculinity may encourage men to assume that wives, partners, and daughters are the possessions of men, and most husbands expect or demand their so-called conjugal rights. Concepts of femininity expect subordination, which can imply over-sexualizing young women while also associating shame with female sexual expression. Presence of specific harmful cultural practices— such as virginity testing or sexual cleansing of widows—may place young widowed women at risk of HIV

The human rights environment is further illustrated by the laws, policies, strategies and guidelines in place to protect the rights of all persons including vulnerable and key populations access to healthcare. These include SRH, HIV and gender guidelines, laws and policies that recognise the need for rights-based programmes and healthcare services, and regulate professional and ethical conduct of health workers. Some of these policies provide protection for rights of all people within the context of HIV such as right to testing and treatment, confidentiality of services and non-discrimination at the workplace. National policies and strategies also recognise vulnerable populations such as women, children and young people access to health care particularly SRH. However, challenges remain in the way these protective policies, laws and guidelines are executed. Services still remain unfriendly to adolescents and young people and men; PLHIV continue to face stigma and discrimination across all sectors of society; laws criminalise same-sex sex and sex work and drug use exposing key populations to indignity, harassment and violence hindering their access to health services; stigma and negative attitudes towards KPs is prevalent in the health system. The vulnerable and key populations have limited awareness of their rights and knowledge or even capacity to navigate the justice systems or even to seek healthcare related to the sexual and physical violence they experience. Structures to assist vulnerable populations seek justice and access healthcare (such as paralegal services, peer-led services, supportive community environment and responsive health and justice system) are also weak and the environment may not be supportive of relevant legal and policy reforms[20]. This funding request prioritises interventions geared towards navigating the current environment to deliver services while equity in services delivery is achieved through investing in rural areas where access to healthcare is limited and districts with high new HIV infections, GBV, teenage pregnancy among other vulnerability factors are high.

Role of private sector

The private sector plays a key role in the HIV response in providing HIV prevention, treatment and care services. Private healthcare providers deliver HIV treatment, care and support to a cohort on clients and

[19] Zambia Demographic and Health Surveys, 2001/02, 2007. 2013/14 and 2018
[20] Zambia Legal Environment Assessment for HIV, TB and Sexual and Reproductive Health and Rights, 2019

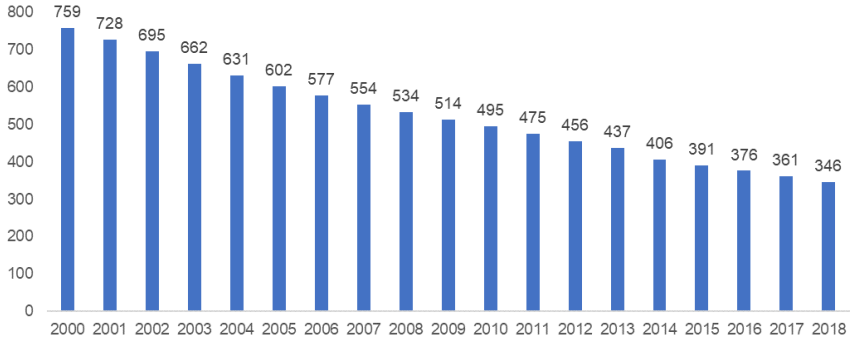
report to the national data system. Private sector also provides a SRH and MNCH services including family planning, STI management and PMTCT. There is potential for strengthening private sector partnership with government given that there are clients who prefer to seek services in private sector.

Overview of the TB Epidemic in Zambia

TB incidence and notification

Zambia is among the 30 high TB and TB-HIV burden countries globally. TB is among the top 10 causes of morbidity and mortality accounting for over 40% of deaths among PLHIV. The estimated incidence in 2018 was 346 per 100,000 population. Though this represents a decrease of 54% compared with the level in 2000 (759/100,000 population), this rate remains high. Between 2015 and 2018 TB incidence fell from 391/100,000 population to 346/100,000 population representing an annual average reduction of 4%, falling short of achieving an annual rate of reduction of 27% to meet sustainable development goal target of ending the TB epidemic by 2030 (figure 9). In 2018 HIV rate among notified TB patients was 59%, indicating that HIV is main driver of the TB epidemic. TB in Zambia kills nearly 18,000 people every year, 72% of those who die are PLHIV emphasizing the need for a stronger collaboration between TB and HIV programmes.

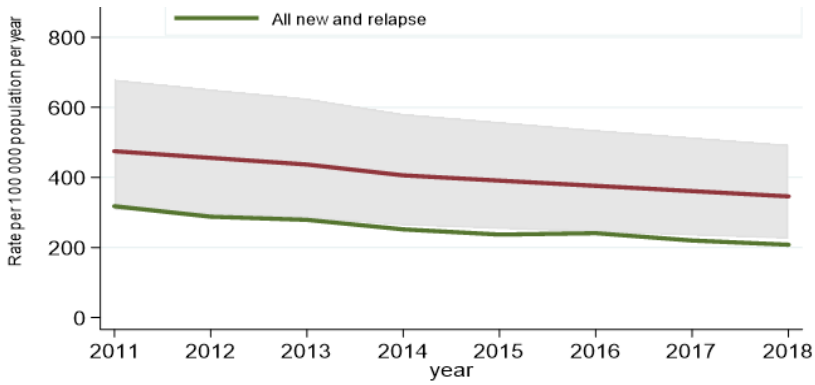
Figure 7:Trends of estimated TB incidence rate (2000-2018)



The reduction in TB incidence can be attributed to high ART coverage, high TB treatment success rate, and rapid scale-up of World Health Organization (WHO) recommended rapid TB diagnostics such as GeneXpert. Similar progress has been noted in the reduction of the TB mortality rate that has reduced by 56% (from 233 in 2000 to 102 in 2018). Mortality among TB/HIV patients declined from 202 per 100 000 population in 2000 to 74 per 100 0000 population in 2018. TB deaths among HIV-negative people has remained relatively the same, at 30 deaths per 100 000 population, over the past two decades, which means Zambia is not on track to meet the 2020 milestones of the National TB Strategic Plan and End TB strategy.

Investments in TB control over the years focused much on enhancing intensified TB case finding (ICF) in health facilities and active case finding at community (ACF) level. However, these investments have not resulted in improving TB case notifications. The gap between estimated TB incidence and TB notifications remain wide, and treatment coverage was low at 58% in 2018 (Over 40% of TB cases are missed). Results from the countrywide data quality audit (DQA) conducted in 2019 show that the people with missed TB are not only due to under detection but also some are not notified. 33% of patients diagnosed with TB are not notified supporting a reason why despite investment in ICF and ACF TB notifications remain low.

Figure 8: Estimated incidence of TB in Zambia and actual notifications from 2011 to 2018

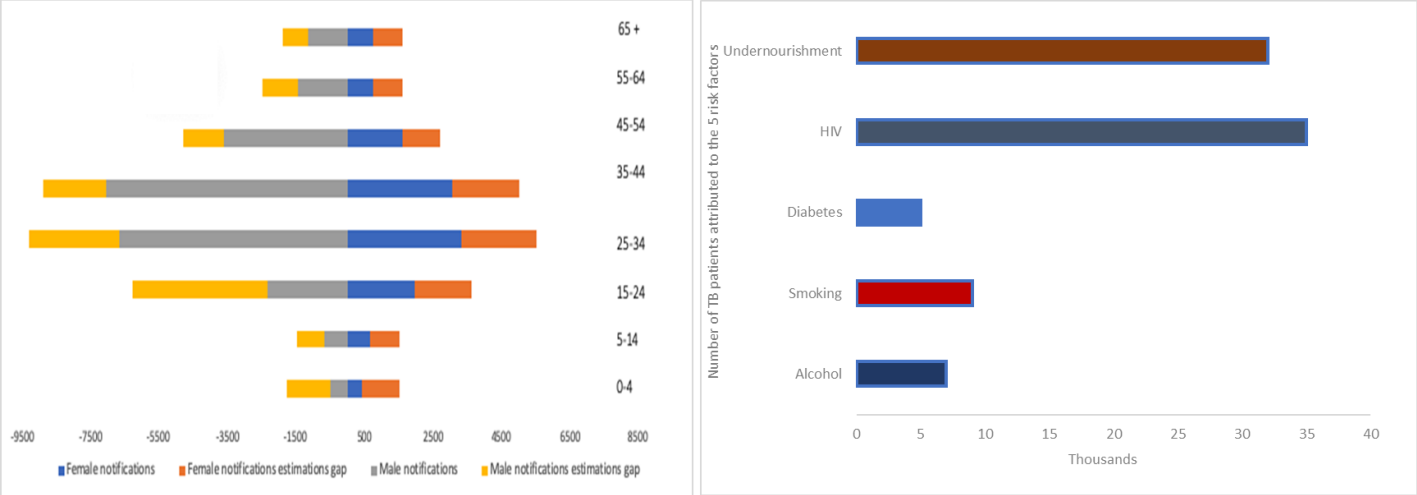


Results from the TB prevalence survey conducted in 2013/2014 found that TB prevalence was high (638/100.000 population and 455/100,000 population for bacteriologically confirmed and all forms and ages, respectively. TB prevalence is unevenly distributed by population and by geographical areas. TB prevalence is high in the Copperbelt and Lusaka provinces at 1211 and 932/100,000 population, respectively. Prevalence is high in the urban than in the rural, higher in HIV positives than in their HIV negative counterparts, higher in men than in women and the age group

25-44 years which are the productive group bear the brunt of the TB epidemic in Zambia.

While the TB burden is high in the 25-44 age group, the epidemiological review of 2020 showed that in other age groups the gap between the estimated incidence and the notifications are high especially among males aged 15-24 years. TB notification in children is also low (even lower among 0-4 years age group) at 6% lower than expected standards of at least 10%.

Figure 9: Gap between TB notifications and the estimated incidence by age (Left) and gender and Drivers of TB epidemic in Zambia (Right)

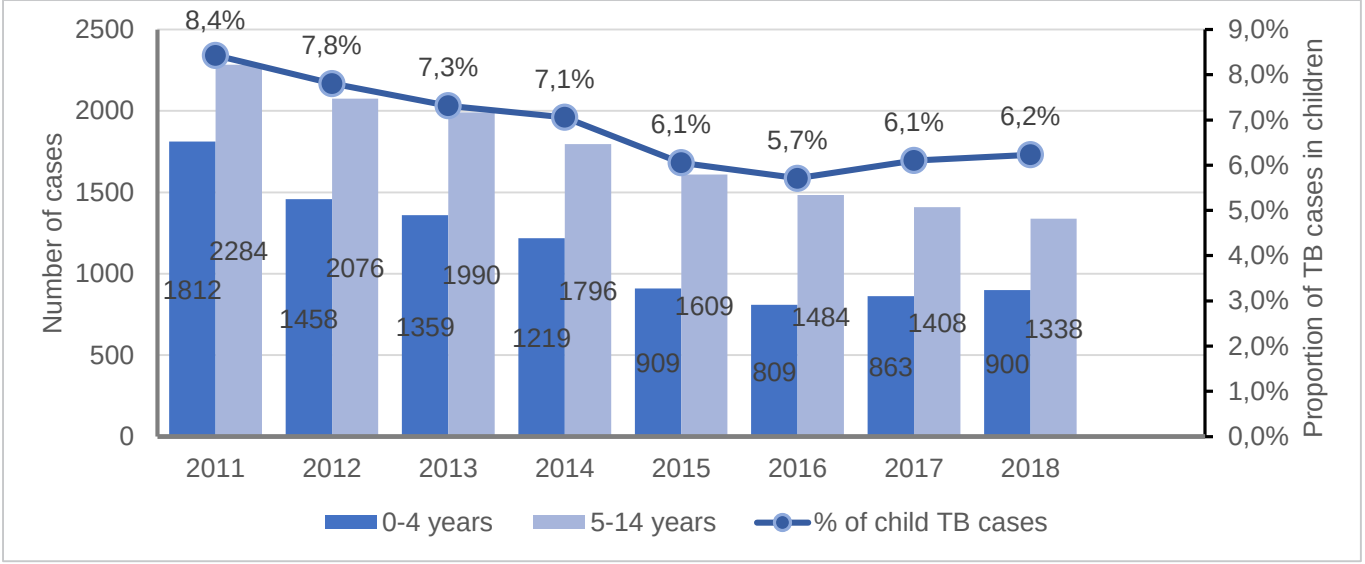


HIV and undernutrition lead in predisposing persons to developing TB followed by smoking, alcohol use and diabetes. These risks have effects across the population and across all age groups and gender. 15.8% of adults aged between 18 to 69 years' smoke. Males smoke more than females (23.0% vs 2.0%) and more male in rural areas than in urban areas (26.8% vs 18.5%). Secondhand smoke exposure at home is similar among men than women (17.0 vs 17.9%), while at work, it is higher among male than among female (25.7% vs 16.5%). The prevalence of alcohol consumption is at 21.7%. Men take alcohol more than women (32.0% of alcohol consumption vs 11.8%). Alcohol consumption is higher in urban than rural settings[21].

TB in Children

TB cases in children declined between 2011 and 2016. The decrease between 2016 and 2018 was driven by the decline in TB cases in children aged 5-14 years. TB cases in children aged 0-4 increased in the same period (2016 and 2018) suggesting a slight improvement in the diagnosis of childhood TB. However, the proportion of childhood TB cases among all forms of TB declined from 8.4% in 2011 to 6.2% in 2018, showing that comparatively less than the expected childhood TB cases were notified during the period.

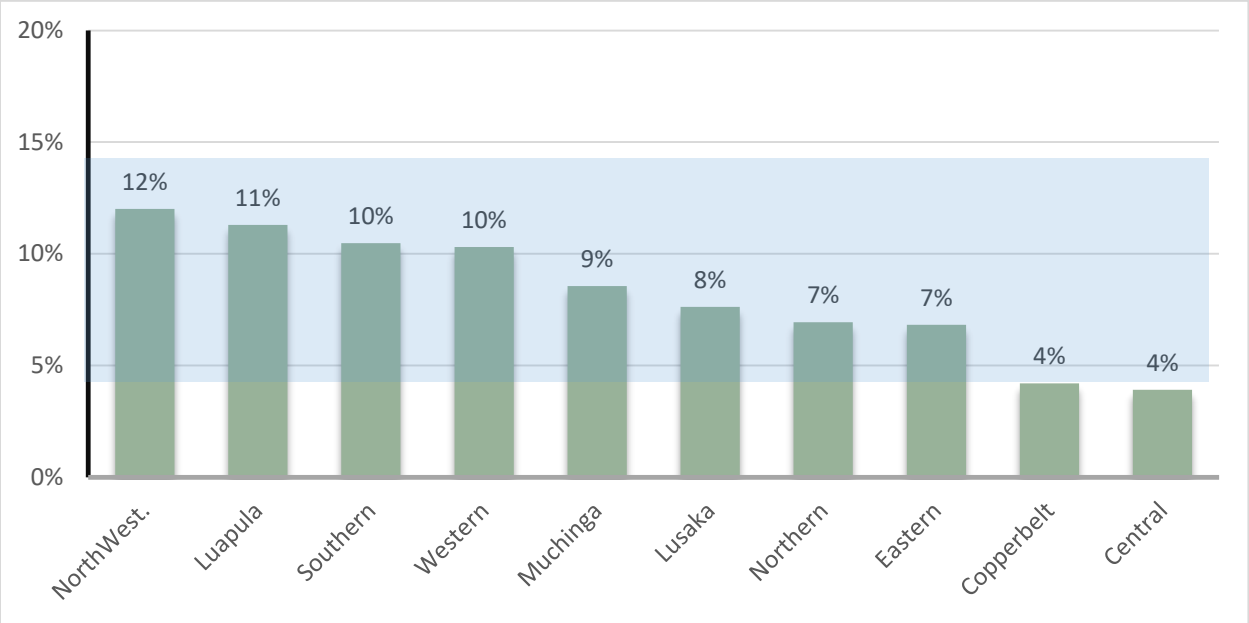
Figure 10: Trend in notified number of TB cases in children and proportion of child TB among all forms of TB, Zambia, 2011–2018



[21] Zambia Steps Survey on Non-Communicable Disease Risk, 2017

New notifications for children under 15 years of age was relatively stable between 2016 and 2018, though barely above the minimum expected threshold of 5% for low and middle-income countries. Follow-up DQA showed under-notification and under-reporting of childhood TB cases. Notifications in children varies significantly by province, ranging from 4% to 12%. The difference in Childhood TB notification is influenced by the burden of disease, population, availability of skilled human resource, and availability of diagnostic tools. Access to TST/IGRA is limited which negatively affects the index of suspicion and diagnosis.

Figure 11: Percentage of TB notifications for patients aged 0-14 by province in 2018 (shaded area indicates expected range)



Over the last decades Zambia has sustained high treatment success rate of 85% or above and reached 90% in 2018. The improvement is largely due to the reduction in the number of patients whose treatment outcomes were not evaluated which decreased from 5% to 2% between 2013 and 2017 cohorts. Although treatment success rate is 90%, the rate may be lower than that reported because TB patients who die or those lost to follow-up before initiating TB treatment are not notified. Among HIV positive TB patients, treatment success rates are lower. In 2018 treatment success rates in PLHIVs was 88%. Proportion of patients who die while on TB treatment vary significantly across provinces, with Southern and Eastern provinces having the greatest proportions of 11% and 10.5%, respectively and Lusaka has the least at 3.7%[22,23]. This funding request will support investigations on the factors associated with high proportion of deaths in these provinces.

TB in the mines and peri-mining communities

The mining in Zambia extends beyond the traditional mining provinces of Copperbelt and North Western. Each province has some form of mining activity from larger scale to small scale artisanal mining. The risk of TB among miners in Zambia is 10-fold that of the general population and the risk is higher if a mineworker has HIV[24]. HIV prevalence among mineworkers is 18.1 % which is above that of the general population (at 11.1%)[25]. The two large mining provinces of Copperbelt and North-Western contribute about 25-30% of the annual notifications. Time modelling done in 2019 shows that Copperbelt province alone contributes 20% of the estimated national TB incidence annually. This shows that miners/ex-miners and the peri-mining communities are at increased risk of TB and have higher risk of poor outcomes of treatment. With World Bank support, the country is currently addressing TB among mineworkers.

TB situation in prisons

The risk of TB transmission among prisoners is high due overcrowding, poor nutrition, HIV infections and inadequate screening. This risk is compounded because the Zambian Correctional health system has historically lacked the resources and capacity needed to implement rigorous screening, diagnosis, and treatment measures for communicable diseases among inmates. Mass screening of TB conducted in

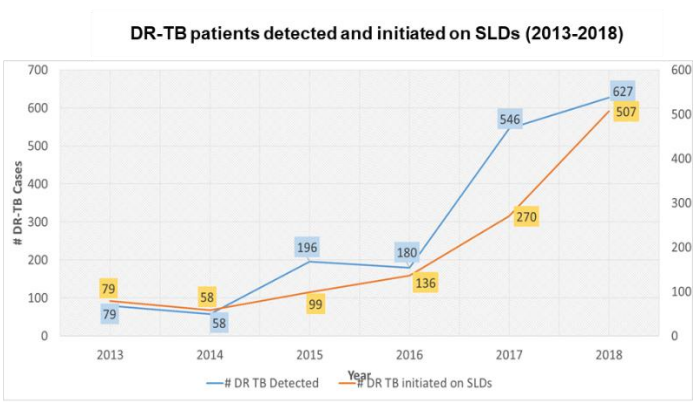
[22] Epidemiological Review of Tuberculosis in Zambia, 2020
[23] Underreporting of TB Patients in Zambia, 2019
[24] Tuberculosis in the mines of Zambia: A case for intervention, Kapata et.al. 2016
[25] Evans et al 2016

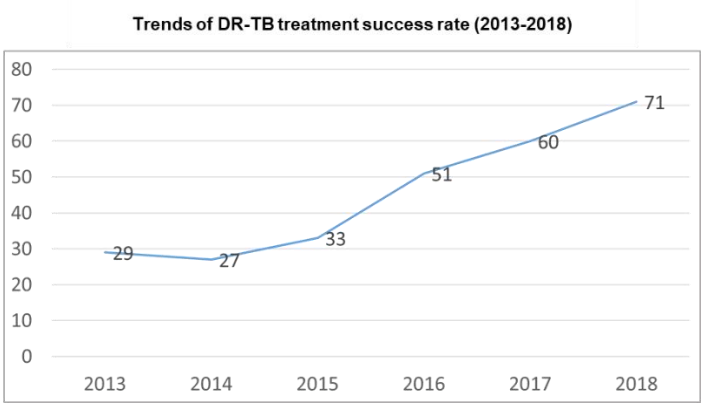
correctional facilities in 2018 found 107 new cases translating to 1,032/100,000 population in prisons. Interventions in this funding request for finding missing people with TB will prioritise prisons.

MDR-TB

The proportion of TB patients with multi-drug resistant/Rifampicin resistant tuberculosis (MDR/RR-TB) was 2.8% among new cases, and 18% among previously treated cases, with an estimated 3,100 drug resistant (DR-TB) incident cases in 2018[26]. The policy to make GeneXpert the first line diagnostic test for all presumptive TB case has contributed to the increase of rifampicin resistant confirmed patients from 99 in 2013 to 507 in 2018[27]. The country has adopted an all oral MDR/RR-TB treatment regimen and has also decentralized MDR/RR-TB management from only 2 treatment centres in 2017 to 32 in 2019 in all the ten provinces. This has improved linkage of MDR/RR-TB patients to care. The majority of MDR/RR-TB patients are on ambulatory care, while admission is reserved for acutely ill patients, pre-XDR and XDR-TB patients. All MDR/RR-TB patients receive nutritional support and those who live far from the treatment centres received transport reimbursement for monthly clinical reviews. The goal is to attain 82% treatment success rate by 2023.

Figure 12: DR-TB patients detected and initiated on SLDs (2013-2018) – Left and Trends of DR TB treatment success rate (2013-2018) - Rights





TB Preventive Therapy

The landscape of TPT has changed over the past one year. In 2018, only 18,000 completed TPT, while in 2019 there was an exponential increase with at least 110,000 completing the therapy. This change is largely due to political will to scale up TPT and the pragmatic approach taken by both TB and HIV programmes. This has generated pressure on TPT commodities with the need among PLHIV alone being 870,000. This funding request will assist in scaling up TPT especially among PLHIV. Secondly, TPT completion rate is at 70%. TPT completion tends to be higher in persons that know their latent TB status[28] and such efforts will be supported in this funding request to scale up TPT. The TB/HIV co-infection has reduced from 59% in 2018 to 46%. This coincides partly due to the increase in the TPT uptake and other factors such as increase in ART uptake and viral load suppression rates. This funding request will sustain the screening of PLHIV for TB.

Protection of human rights of people TB patients

The laws for respecting, protecting and fulfilling human rights exists in the Laws of Zambia and international conventions that Zambia has agreed to through institutions like the United Nations (UN), African Union (AU) and the Southern Africa Development Community (SADC). Legally, there is no discrimination on access to health services for any person and for any illnesses in the country. Zambia is in a process of undertaking the second patient cost survey to determine the rates of TB patients and families that face catastrophic cost when accessing TB services.

Role of private sector

There has been an attempt to improve the involvement of the private sector in TB control efforts. But despite the growing number of private hospitals and clinics, the country has not fully leveraged on the network of private providers to narrow the gap of people with missed TB and improve access to TB diagnosis and treatment services.

[26] Global TB Report, 2019
[27] National TB Report, 2019
[28] Mwinga et.al

Overview of the Systems for Health in Zambia

Human Resources for Health

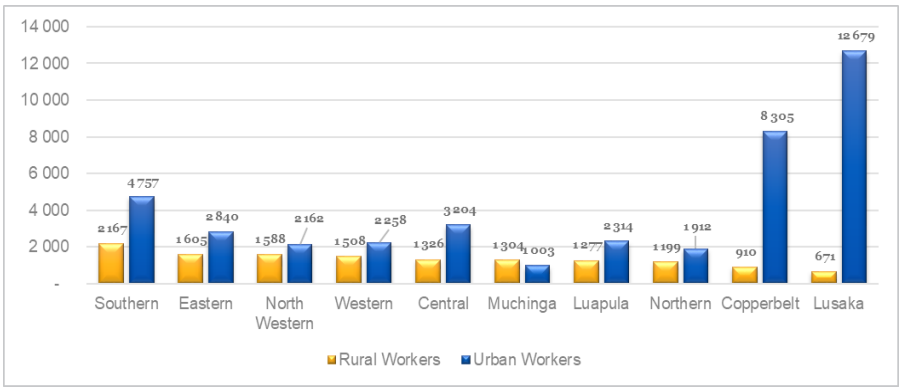
Zambia has a total of 60,810 health workforce against an approved establishment of 126,349 leaving a vacancy gap of 52% across all cadres as at 2019 up from 44% in 2010. From 2014 to 2019, the proportion of doctors, nurses and midwives per 1000 population averaged 1.2, which is significantly below the 2.5 recommended by World Health Organization (WHO). Although the number of health workforce has increased over time, the country continues to experience a shortfall in frontline workers. The shortfall in nurses is 34%, midwives 66%, laboratory personnel 33% and community health assistants 23% (see table below).

Table 3: HRH filled establishment and gap (Ministry of Health Data, 2020)

CATEGORY	2010			2019		
	Approved	Actual	Gap %	Approved	Actual	Gap %
Administrative	15,235	14,457	5	48,443	18,961	61
CHA				1,788	1,377	23
Clinical Officer	4,813	1,535	68	7,219	3,343	54
Dental	865	257	70	2,425	504	79
Doctor	2,939	911	69	5,984	2,463	59
Environmental	2,063	1,203	42	4,975	2,541	49
Laboratory	2,023	639	68	3,508	2,345	33
Midwife				11,615	3,973	66
Nurse	23,603	10,340	56	30,481	20,182	34
Nutrition	330	139	58	1,544	1,361	12
Pharmacy	1,108	371	67	3,669	1,735	53
Physiotherapy	421	239	43	939	733	22
Radiology	483	239	51	1,706	774	55
Teaching				2,053	518	75
TOTALS	**53,883**	**30,330**	**44**	**126,349**	**60,810**	**52**

Geographical disparities exist in the deployment of healthcare creating inequalities in availability and access to healthcare. In rural Zambia, where 58% of the Zambian population resides and where the burden and mortality ratios are highest, the number of rural health workers is estimated at 13,555 (24.7%) against the urban numbers of 41,434 (75.3%). The shortage in the rural areas cuts across all cadres, but is acutely felt among clinicians, nurses, biomedical equipment technologist, pharmacy technologists, laboratory technologists and radiographers. A provincial disaggregation of health workers shows that the distribution is skewed toward urban areas (Figure below). Government (through its commitments) and with support of GF will continue investing in frontline HCWs especially in rural areas. Zambia has shown strong commitment and adherence to the transitioning of health workers onto government payroll 2018 (200 nurses) and 2019 (150 nurses) the transition is to sustain the gains that have been achieved in the current budget through in the underserved rural areas.

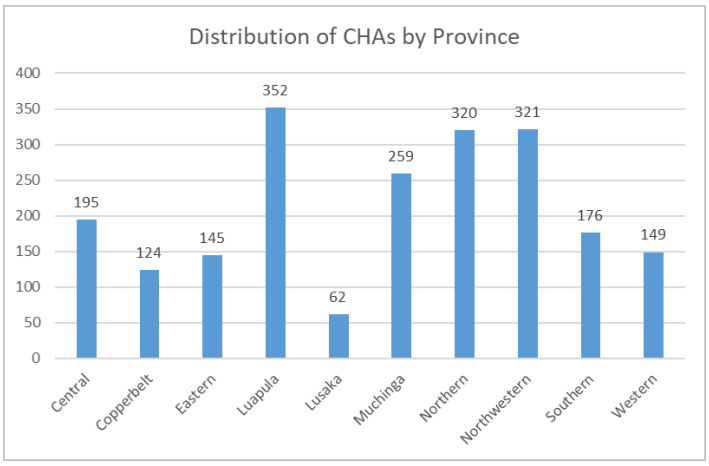
Figure 13: Health Workers Distribution by Province, (Ministry of Health Data, 2020)

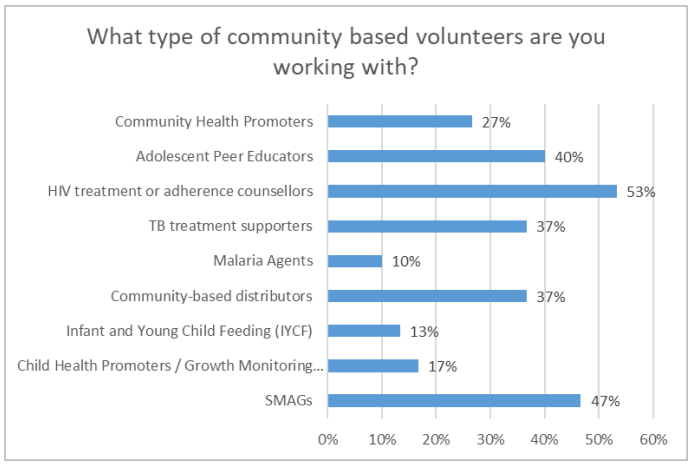


Community Health Workforce, comprising of several types of cadres, constitute a key component of community health. So far a total of 3,101 Community Health Assistants (CHAs) have been trained and, of these, 2,150 are employed with support of Government and development partners. The major challenge is the fragmented nature of community volunteers working in different vertical programmes providing, undertaking differing training and lack of standard guidelines for incentives or working hours. There is also a high turnover of these volunteers. The figure below shows the CHAs distribution and types of community based volunteers in the country[29].

[29] Community Health Strategy, 2017-2021

Figure 14: Distribution of CHAs by province (Left) and Types of Community Based Volunteers in the Country – Right (MOH, 2020)



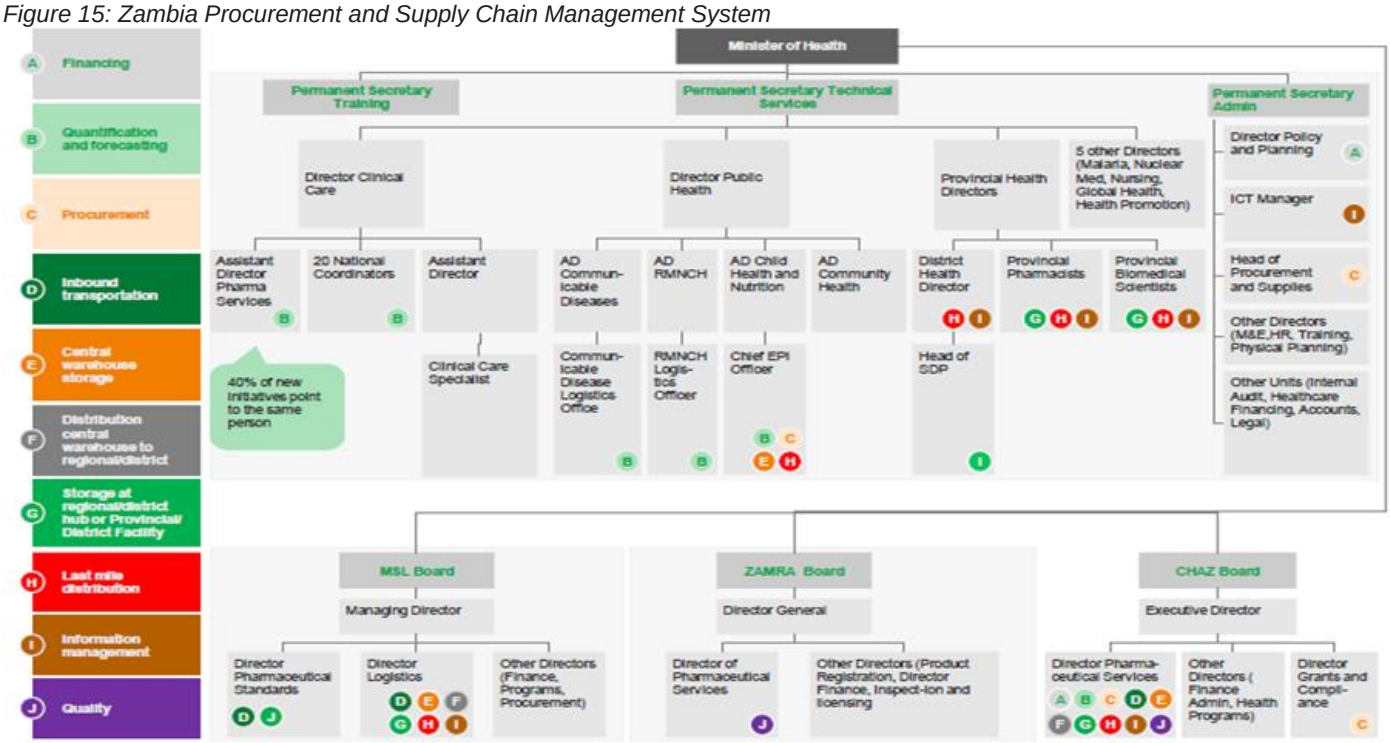


Procurement and supply chain system

The PSCM system functions in Zambia are spread across several MoH directors, Medical Stores Limited (MSL) and Churches Health Association of Zambia (CHAZ), and Zambia medicines Regulatory Authority (ZAMRA). There is no single institution with end to end responsibility for all PSCM functions. This fragmented governance has held back the achievement of optimum availability and access to health products, compelling the country to enact a new legislation in 2019 establishing the Zambia Medical Supplies Agency (ZAMMSA). The Minister of Health is likely to issue a statutory instrument to convert MSL into ZAMMSA later in 2020. Other supply chain challenges include parallel supply chains with medicines such as those for TB, nutrition and vaccines; inadequate performance of the PSCM system, delay in delivery of orders to regional hubs and to health facilities. In addition, the Logistics Information Management System (LMIS) does not integrate pipeline data, distribution scheduling and performance tracking. Health facility orders are still processed at the central level thus bypassing the regional hubs resulting in order variations and supply delays[30].

Scale-up of Warehouse Management Systems (WMS) to all hubs will facilitate order processing at this level and improve responsiveness to health facility needs. Furthermore, operational support to the hubs will ensure delivery of medicines and health products to all health facilities and address order variability, stock outs and stock wastage. USAID is supporting a new eSCMIS which will work in tandem with the WMS and provide stock visibility across the supply chain.

Figure 15: Zambia Procurement and Supply Chain Management System

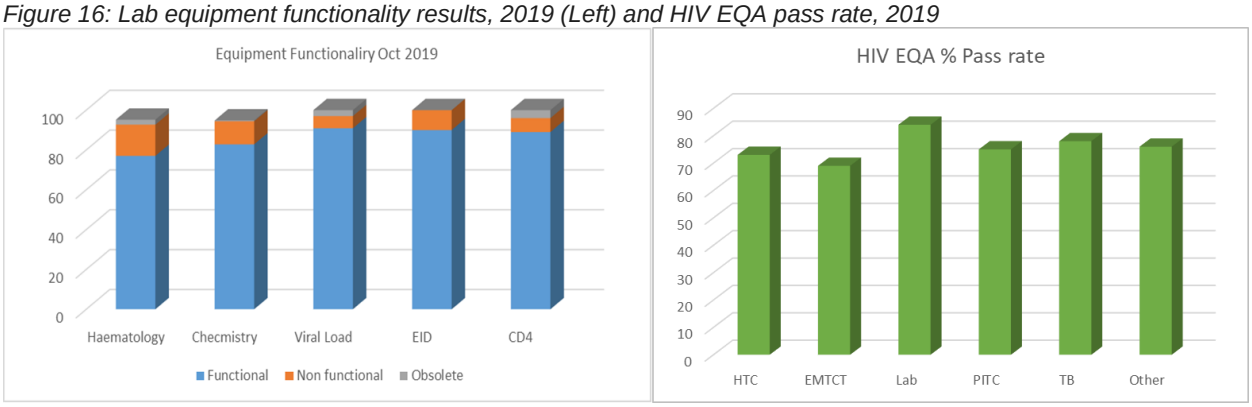


[30] Health Sector Supply Chain Strategy and Implementation Plan 2019 – 2021

Laboratory System

Zambia has a five-tier laboratory system: starting at the health post and health centre through level 1, 2, and 3 hospitals. In addition, there are mobile health services provided for distant locations. For each level, minimum standard requirements for test profiles, equipment, reagents, and consumables have been defined. Investigations that cannot be effectively carried at one level are supposed to be referred to higher levels. There are a total of 395 laboratories in the public sector. Key challenges facing the laboratory systems include gaps in maintenance of diagnostic equipment as shown in figure 18 below on equipment functionality. Further, only four laboratories provide pathology services due to limitations of both infrastructure and specialists while bacteriological services for the diagnosis of opportunistic infections is limited to provincial and tertiary hospitals[31]. Measures have been taken to improve quality of laboratory results. By the end of 2019, 18 laboratories were enrolled in quality improvement, and 5 laboratories received ISO 15189 accreditation in various tests including viral load, TB diagnosis, full blood count. Significant gaps remain in quality assurance of lab results. For instance, results from 1,284 sites enrolled on HIV EQA programme show significant gaps in quality (See figure 18 below). This funding request support the increase of labs with accreditation to improve quality of lab services.

Figure 16: Lab equipment functionality results, 2019 (Left) and HIV EQA pass rate, 2019



The procurement and supply of laboratory commodities is one of the key priority areas for the Zambian health sector. Various interventions (with support of partners such as PEPFAR) are being implemented to strengthen the procurement, supply chain storage and distribution of lab commodities such as forecasting and quantification, laboratory and HIV test kit Logistics systems, electronic reporting and ordering systems at MSL and at some service delivery points such as eLMIS. Support will be provided to strengthen lab information system in this funding request.

Health Management Information System

The Health Management Information System (HMIS) has a functional web-based (District Health Information System- DHIS2) primary health care system running in over 95% and 40% of the country's public and private health facilities respectively. The primary health system is used to monitor key HIV and TB related programme indicators. 73% of hospitals are using the events capture module of the DHIS2 system. The hospital DHIS2 has been set out to operate in an off-line mode, and this approach has improved the user coverage and system stability. For data capture at facility level, Smartcare has been rolled to over 35 % of facilities country wide. At community level, the community HMIS via neighbourhood health committees and volunteer rapid reporting has been enhanced. There is limitation in access points for the LIS which houses early infant diagnosis and viral load data. There is thus a need to roll out the use of the LIS to maximise its full potential in informing the program. Further, the quality of training offered to health care workers and facility data managers in data capture and management varies from place to place and time to time depending on the competencies of the trainer.

Community Systems

A wide range of Malaria, TB and HIV services are offered through the community system. Community actors are diverse ranging from civil society organisations, community based organisations, faith based organisations, community-led organisations, networks of youths, women, PLHIV and key populations, peer educators and volunteers, social and behaviour change facilities, TB treatment supporters among others.

[31] Laboratory strategic plan 2018 – 2022

These actors deliver services at community level using community responsive approaches and also monitor and advocate for community healthcare needs. The play a key role in mobilising specific priority populations to access services and build the capacity of community leaders and other actors to generate demand for services. The actors collaborate with the health system to bridge the community with health facilities. Service delivery through the community system, however, faces challenges such as inadequate funding, inadequate technical and organisational capacity, weak data system to measure the contribution of community based interventions and weak coordination of community actors. For instance, the Civil Society Self-Coordinating Mechanism (CSSCM) established in 2014 is largely non-functional due to lack of financial support thus limiting its capacity to coordinate and build the capacity of community actors to implement community-led interventions.

COVID-19 AND HIV

Coronavirus disease 2019 (COVID-19) has spread rapidly around the world since the first reports from Wuhan in China in December 2019. Approximately 37·9 million people living with HIV2 are at risk of infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which causes COVID-19.COVID-19 is a serious disease and all people living with HIV should take all recommended preventive measures to minimize exposure to, and prevent infection by, the virus that causes COVID-19. Targeted responses that consider the unique needs of each population especially the priority and key populations needs get lost between efforts aimed at mitigating the pandemic.

Areas of concern

Across every sphere, from health to the economy, security to social protection, the impacts of COVID-19 are exacerbated for women and girls simply by virtue of their sex:

1. New infections

Implementation of quarantine, social distancing, and community containment measures have reduced access to routine HIV testing. This, in turn will reduce the number of women who know their HIV status, therefore give rise to new infections and ultimately, an increase in the transmission rate both to partners and unborn children or breastfeeding children. This will impede on the country's great strides to achieve the UNAIDS 95-95-95 HIV and eMTCT targets.

Behaviour changes that target slowing transmission are greatly affected in times of a pandemic: sexual behaviour and needle sharing for HIV. Social conditions make it difficult for the vulnerable to change behaviours. With reduced access to sterilized needles and barrier methods of HIV prevention, accompanied with poor adherence to physical proximity for SARS-CoV-2. Encouragement to "Abstain, Be Faithful and Use Condoms" could not prevent HIV where gender inequalities and stigma are still predominant. These factors influence the number of new infections, both for HIV and COVID-19.

2. Economic impact

Compounded economic impacts are felt especially by women and girls who are generally earning less, saving less, and holding insecure jobs or living close to poverty. While early reports reveal more men are dying because of COVID-19, the health of women generally is adversely impacted through the reallocation of resources and priorities. Economic stress on families due to the outbreak can put children, and girls, at greater risk of exploitation, child labour and gender-based violence. Quarantine measures should be accompanied by support for affected households**.**

3. Gender-based violence

Quarantine measures imposed as a response to the COVID-19 pandemic are putting girls and women at heightened risk of violence in the home and cutting them off from essential protection services and social networks. Global lockdowns also lock down girls' autonomy, reinforcing the attitudes and practices that regard girls as second class and hold them back. Rigorous protection and safeguarding of all children, and of girls and women from gender-based violence must be emphasised and prioritised in all policies, information, guidance at all stages of the response.

As the COVID-19 pandemic deepens economic and social stress coupled with restricted movement and social isolation measures, gender-based violence is increasing exponentially. Many women are being forced to 'lockdown' at home with their abusers while services to support survivors are being disrupted or made inaccessible.

4. Sexual and reproductive health services

Evidence from past epidemics indicates healthcare resources are often diverted from routine health services. This further reduces the already limited access of many girls and young women to sexual and reproductive health services, as well as maternal, new-born and child health services. Challenges in accessing sexual and reproductive health information services - including contraception, safe abortion, and HIV medications- will exacerbate the risks to girls' and women's health and lives. Sexual and reproductive health and rights must not be de-prioritised by governments. They are essential life-saving services which need to be part of the critical response to this crisis.

5. Teenage pregnancies

During the school closures of Sierra Leone's Ebola outbreak, "a reported increase in adolescent pregnancies during the outbreak has been attributed largely to the closure of schools." (UNDP 2015). Bandiera and others find that in villages highly disrupted by Ebola, girls were "10.7 percentage points more likely to be become pregnant, with most of these pregnancies occurring out of wedlock." Many girls did not return to schools once they reopen, and there were increases in unwanted sex and transactional sex.

6. Intimate Partner Violence (IPV)

This is mostly because women spend more time with the potential perpetrators of that violence when partial or complete lockdowns or stay-at-home policies have been put into effect. Parkinson and Clare document a 53 percent rise in the wake of an earthquake in New Zealand and nearly a doubling in the wake of Hurricane Katrina in the United States.

7. Care for the ill

The burden of care usually falls on women—not just for children in the face of school closures, but also for extended family members. As family members fall ill, women are more likely to provide care for them (as documented during an Ebola outbreak in Liberia, with AIDS patients in Uganda, and in many other places), putting themselves at higher risk of exposure as well as sacrificing their time. Women are also more likely to be burdened with household tasks, which increase with more people staying at home during a quarantine.

Proposed strategies and interventions

The following key principles have been proposed to guide our response to this crisis:

1. Consider the unique needs of adolescent girls worldwide and the specific risks they face

2. Recognise girls' potential to lead and support them to take on leadership roles in the response

3. Localise our response as much as possible by prioritising the expertise of girls, communities, and local organisations, including the commitment to shifting resources and decision-making into their hands; and supporting locally contextualised action

4. Take a collaborative and coordinated approach that leverages collective expertise and resources

1.3 Lessons Learned from Global Fund and Other Partner Investments

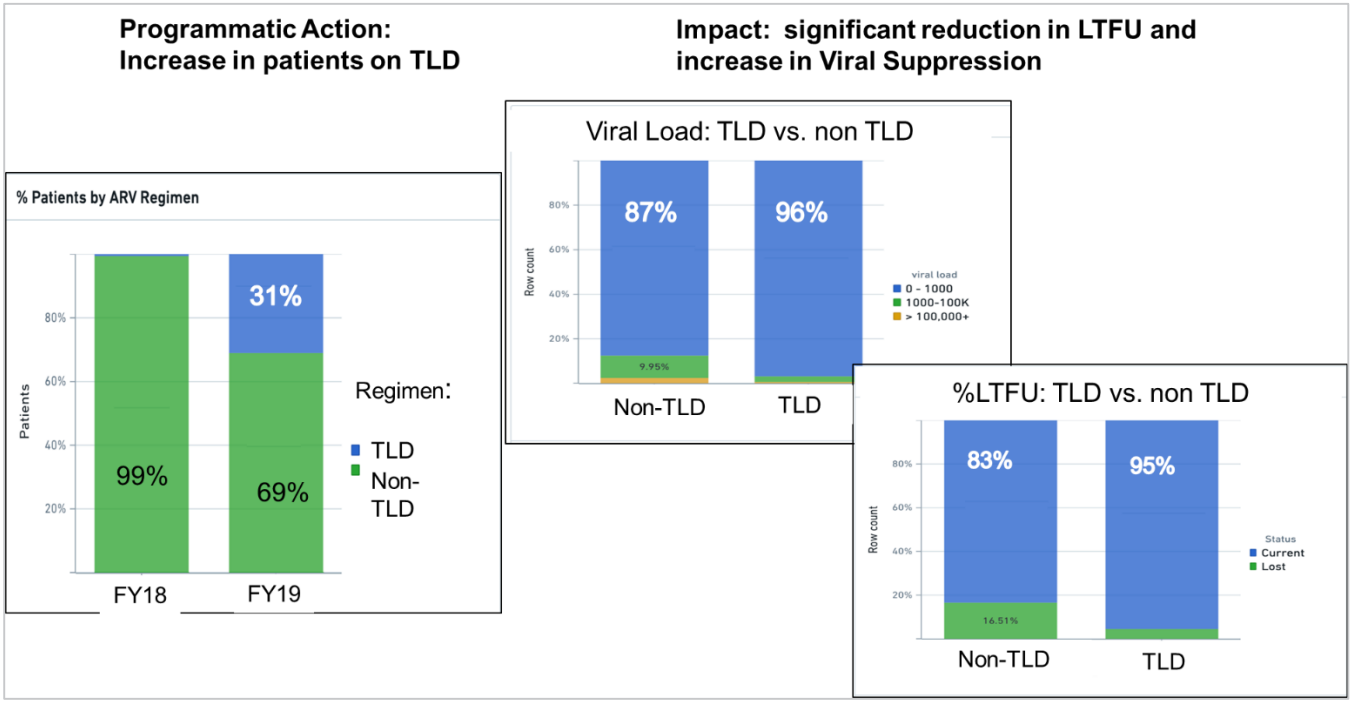
This section describes how Global Fund and domestic investments, as well as those of other partners, supported national health targets during the current allocation period. It includes the main lessons learned that are relevant to this funding request.

Lessons learnt in the HIV response

Lesson: TLD improved retention of PLHIV on ART thus contributing to reduction of LFTU

The use of TLD has proved to increase adherence to treatment among PLHIV who are on ART and therefore contributes to reduction of LFTU which is a major issue in the treatment programme. The figure below shows results from use of TLD to increase retention rates. This funding request will support the scale up of TLD.

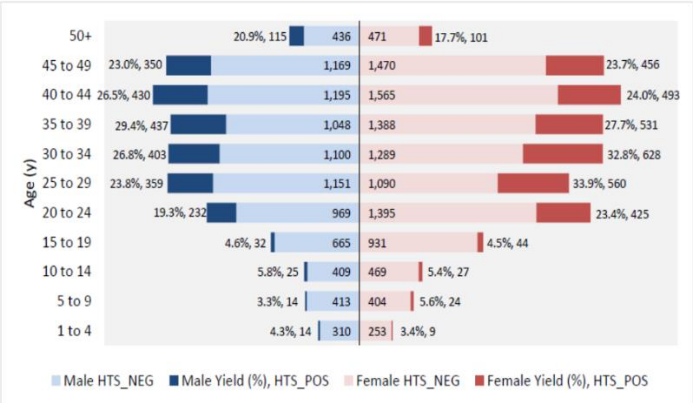
Figure 17: Patients on TLD and LFTU rates (COP20 Outbrief, Zambia)



Lesson: Common health posts, as part of the DSD models, increase access to ART services and contribute to improved retention of PLHIV on ART

The country has introduced Community Health Posts as part of the DSD models. Health posts take services closer to communities and provide easy access to PLHIV picking up drugs. They also offer HTS and other HIV services. Results shows increased utilization of health posts. This funding request will support a scale up of community health posts[32].

Figure 18: Data reported by Circle of Hope on HTS (Left) and ART uptake (Rights) at Community Health Posts from March 2018 to March 2019



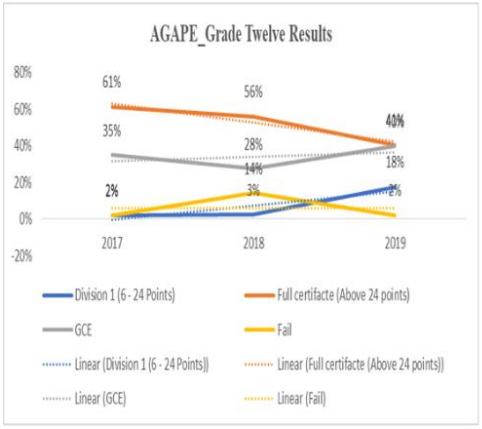
Lesson: HIV prevention interventions for AGYW and their partners have shown promising project level results but most are implemented at a small scale to improve overall outcome indicators

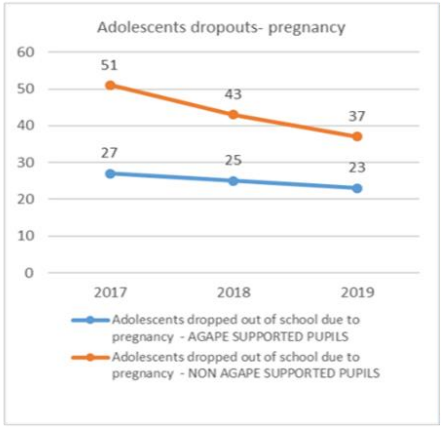
The GF grant supports comprehensive sexuality education (CSE), Behaviour Change Communication (CSE), Social Protection of adolescents and young people and piloting of Adaptive Leadership (AL) strategy. CSE is implemented in all schools in Zambia through the Ministry of Education while Behaviour Change Communication interventions target youths out of school and are delivered through several platforms including social media and adaptive leadership. CSE and SBC interventions are inadequate in scale and scope and there is low participation among adolescents and young people which calls for change of delivery approaches. The Adaptive Leadership (AL) strategy has increased participation of AYP but this initiative is

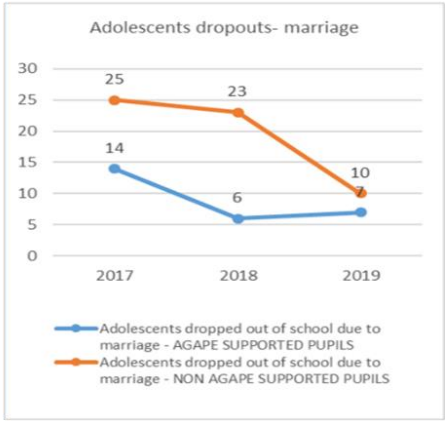
[32] Using faith-based community outreach posts to increase HIV case finding, linkage and retention on treatment in urban and rural settings in Zambia, Circle of Hope, 2020

also covering 2 districts. For the AGAPE initiative, preliminary results show improved outcomes including reduction in teenage pregnancies and school drop-outs as seen in the data below.

Figure 19: Results from the layered support to adolescents and young people (AGAPE initiative)



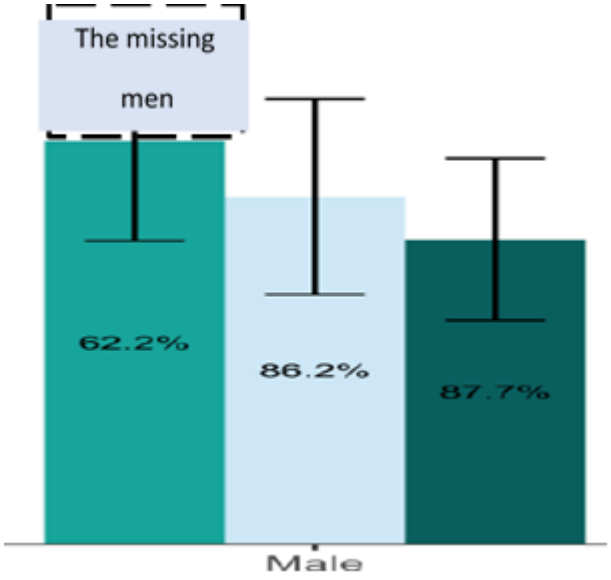




Outcomes of HIV interventions for AGYW at national scale remains low with no significant improvement in comprehensive knowledge and safe sexual behaviour of adolescents and young people over 12-year period from 2007 to 2018[33]. To achieve tangible results and accelerate reduction of new infections among adolescents and young people, this funding request will invest in taking these interventions to scale and modifying the BCC and CSE delivery to be driven by user preferences and use innovative media tools that put AYP at the centre of planning and implementation.

Lesson: Focusing on men and changing their attitudes and health-seeking behaviour has potential to positively impact new infections

Among men who define themselves as heterosexual or bisexual, HIV prevention programs have generally targeted so-called “high-risk” populations, such as migrants and other populations predominantly comprised of men, including truck drivers, mine-workers, the police, prison populations and the military. Many of these targeted approaches have proven successful in preventing HIV, at least in short-term impact evaluation studies. Nonetheless, there is need to incorporate all men and intensify finding the other men, who are falling through the cracks and or being missed by current interventions, as seen in the figure below. In view of the UNAIDS 95-95-95 goal towards the fast track elimination of the HIV pandemic by 2030, the graph shows the 2018 status for men. The first bar, representing the first 95%, shows the gap of the men who do not know their HIV status and have been ‘falling through the cracks’ and ‘missed’.



Given the gendered nature of bisexual relationships in Zambia where women lack capacity to negotiate for safer sexual practices such as condom use, targeting men in HIV prevention interventions has potential to

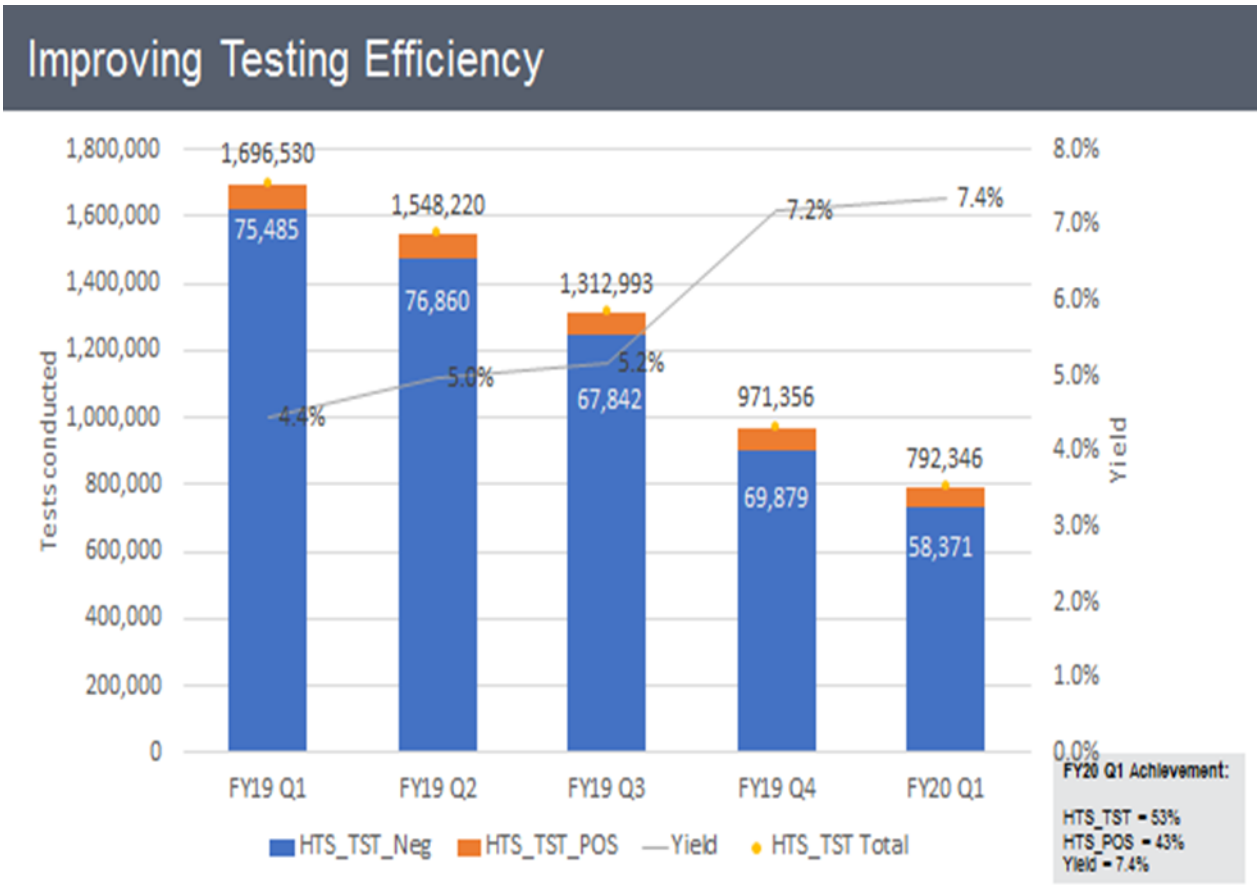
[33] Analysis of HIV and SRH-related risk and vulnerabilities of adolescents and young people in Zambia, NAC 2020

reduce new HIV infections. The NASF review recommends: Engage men to use their position and power in society to promote safe sexual behaviour.

Lesson: The combination of screening, index testing and self-testing HTS modalities increase positivity rate while reducing the number of overall tests conducted thus increasing cost efficiency

As the country gets closer to achieving the 1st 90, the focus of HTS programme has changed to the use of index testing and HIV screening tool approaches to offer universal testing within populations where there is likely to be a higher positive yield. The use of the screening tool prior to HIV testing was rolled out in 2019 and shows increased positivity yield (4.9%() with less number of people tested (4,485,134 compared to 4,785,467 tested in 2018 with a positive yield of 4.4%. This funding request will scale up and improve the quality of HIV screening countrywide to improve efficiency[34].

Figure 20: Number of tested for HIV and positive yield in 2019-2020 (COP20 outbrief)



Lesson: Use of Point of Care (POC) for Early Infant Diagnosis (EID) improves turn-around time (TAT) for results

From June 2018 to March 2019, POC for EID was implemented in 7 selected facilities in 3 provinces to increase EID coverage and address challenges in EID cascade such as low proportion of care givers receiving results to increase the number of HIV infected infants started on ART. The results are shown in the table below. Given the success achieved, the pilot project has been mainstreamed in the PMTCT programme and will be scaled up in selected facilities with low PMTCT performance countrywide.

Indicator	Target	Result
Number and percent of POC EID test results returned to caregiver	98%	95.3%
TAT between POC EID sample collection and results received by caregiver	0 days	0 days (0—1)
Percent of HIV-infected children identified through POC EID testing initiated on treatment	90%	88%
Median number of calendar days from POC EID blood sample collection to initiation on ART for all HIV-infected infants	14 days)	I day (0-3)
Data source: EGPAF 2019		

[34] Zambia Consolidated Guidelines for Treatment and Prevention of HIV Infections, 2020 – pages 2 to 5

Lesson: Lack of well-coordinated distribution mechanism for condoms at district and community levels limits equitable distribution of condoms to vulnerable and key populations

Zambia has a three-tier public sector distribution systems for health products including condoms. The central warehouse at MSL supplies to the provincial hubs and/or districts which in turn supply to service delivery points (SDPs). Other partners support a supply chain undertaken through Third Part Logistics (3PL) to deliver commodities including condoms from MSL stores to the hubs, districts and high volume facilities. Distribution of condoms from districts to SDPs is the responsibility of District Health Management Teams (DHMTs). Distribution mechanisms beyond districts and health facilities is a challenge. Coordination at district and community level is weak due to lack of standard procedures for collection of condoms by partners other than health facilities and this limits availability of condoms to users at community level. DHMTs lack distribution capacity down to the last mile[35]. To address this challenge, this funding request will support community based distribution mechanisms suitable for priority populations will be established to ensure targeted distribution to those in greatest need.

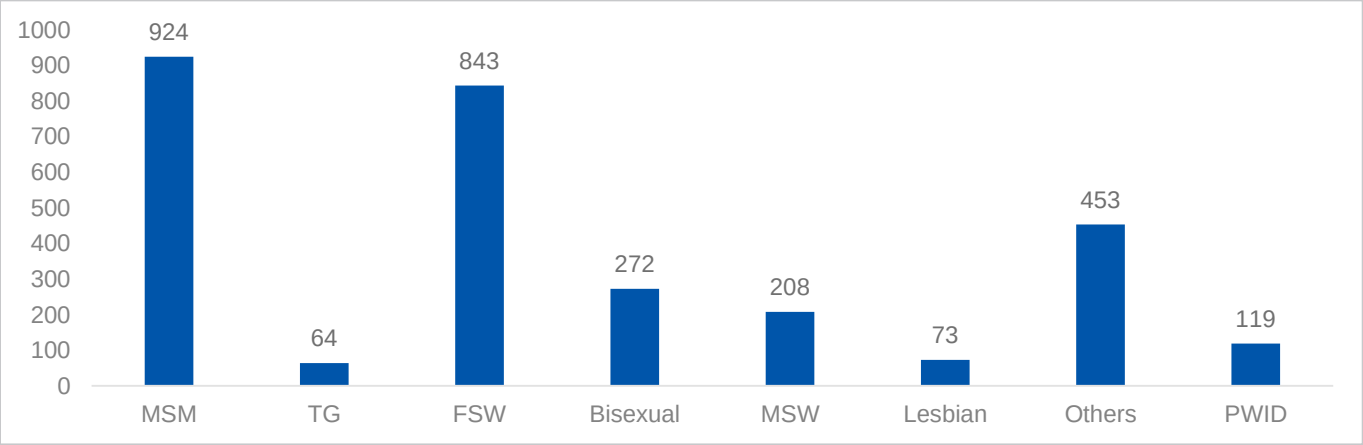
Lesson: Taking condoms to the community and making them accessible at the nearest point of use increases demand for and use of condoms, especially among young people

Community based interventions are essential for successful equitable distribution of condoms to nearest points of use. The PEPFAR funded DREAMS initiative has demonstrated the effectiveness of community-based interventions in ensuring that condoms are distributed at the nearest point of use at the community and using peer networks to reach Adolescents and young people. In this initiative, condoms are also integrated into SRH and other HIV services. Based on this lesson, the condom programme, through the GF grant, will roll out a model of community based walk-in centers or outlets in an effort to scale up distribution and increase uptake among young people and integrate condoms into SRH and other HIV prevention services.

Lesson: Involvement of KP networks in programme implementation and KP led HIV service delivery results in increased service uptake among KPs.

In service delivery facilities where KP community have been involved, evidence of increased coverage reach, and sustained health care utilization continues to be reported. In such facilities, the use of peer led community interventions has been critical in catalysing KP access to care which has resulted in improved overall coverage especially in selected urban areas. For instance, in the KP led initiatives at the University Teaching Hospital (UTH) Saturday clinic has shown improved results in service uptake by KPs from 2017 to date as shown below. This funding request will invest in KP involvement in HIV service delivery and expansion of KP led HIV service delivery such as identification of KP that need services using peers and the use of the 'Saturday clinic" model which is specific to KPs.

Figure 21: KP group Saturday Clinic service uptake (2017 to 2020), programme data



Lesson: Interventions addressing gender and human rights issues related to HIV are limited on scale and not well coordinated to achieve visibility and results

Interventions addressing GBV and human rights barriers in accessing HIV and SRH services especially among women are embedded in the PEPFAR supported DREAMS and Global Fund supported AGAPE initiatives. These interventions have shown results in empowerment of AGYW by keeping girls in school,

[35] National Comprehensive Condom Programming Strategy 2020-2023 page 6

increasing access to SRH and reducing GBV through layered behavioural change and social protection strategies. However, initiatives to address the broader human rights challenges such as limited adolescent and youth friendly services, age of consent for SRH services, stigma and discrimination and other rights violations, barriers to access to justice, low awareness of rights among vulnerable and key populations, limited understanding of KP health needs by law enforcement agencies and other justice sector actors; stigma and negative attitudes within the health system among others are limited in scope. Rights based HIV response is critical for improved outcome of the programmatic intervention in place. This funding request supported interventions for removing human rights barriers across all module.

Lessons learnt in the TB response

Lessons Learnt from Implementation of Global Fund Support

Lesson: Contact tracing can contribute significantly to finding missing people with TB

In 2020, the NTLP conducted contact tracing campaign of household contacts of DR-TB. A total of 3,415 contacts of 608 drug resistant TB index patients were screened. Of the total contacts traced, 2,519 (74%) were screened with GeneXpert or microscopy and 2,360 (69%) were screened using a chest X-ray. A total of 70 household contacts were found with active TB. Of these, 20 (29%) were bacteriologically confirmed, while 50 (71%) were clinically diagnosed (using chest X-ray). Of the 20 bacteriologically confirmed, two were rifampicin resistant. This intervention confirmed the value of contact tracing and calls for a review of the current approaches to conducting contact tracing of both drug sensitive and drug resistant TB patients. While the focus was on DR-TB contacts, this will be extended to both DS-TB and DR-TB in the next Grant.

Lessons: Active case finding in the community coupled with Intensified TB case at health facility level yield better results

In 2018 and 2019, the NTLP conducted several ACF/ICF interventions across the country. The highest yields were when community interventions were combined with health facility ICF. In 2018 ACF/ICF activities alone contributed 9,571 (27%) out of 35,071 of new and relapsed TB cases notified. But in 2019 when resources were limited and hardly any access to a mobile digital X-ray, the contribution of ACF/ICF drastically reduced to 11% of the annual notifications. Lesson learnt is that combined ACF/ICF gives a better yield than either of the two done alone and that ACF/ICF can have a huge impact on the annual notification if only the frequency and coverage of ACF/ICF is increased. ACF/ICF provides better yields in high density areas, with active participation of CHWs and CBOs/NGOs, involvement of other providers and diagnostics complemented with use of digital X-rays. This funding request will support this approach to ACF/ICF.

Lesson: Under notification and under reporting of TB cases significantly contribute to the low TB notifications in Zambia

TB notifications in Zambia have been going down since 2004. Significant decrease was recorded from 2015 onwards and reached the lowest level in 2018 when 36,922 TB cases were reported against a target of 54,620. A data audit carried out in 2019 revealed that of the 28,402 TB cases diagnosed between January-August 2019, a total 9,308(33%) were not notified (registered in the health facility treatment register). The audit revealed that the low TB case notifications is partly due to under notification and under reporting of TB cases. Lack of an electronic case-based system, insufficient skills in recording and reporting and data management by staff at district and health facility level were some of the contributing factors for the high rates on under notification and under reporting of TB cases. This funding request will strengthen data management, expand notification sites and increase capacity of HCWs in reporting.

Lesson: Scaling up TB preventive therapy (TPT) will facilitate meeting the UN HLM targets

Zambia has increased TPT coverage mostly in PLHIV and is on course to achieving the United Nations High Level Meeting (UN HLM) targets by 2022. The number of PLHIV that started TPT increased from 24,000 in 2017 to 49,000 and further increased to 188,000 in 2019. Moving forward, Zambia will embark on a compressive TPT provision that includes other risk populations as stated in the national TPT guidelines. Use of 3HP will be introduced in 2020. This funding request will support this scale up.

Lessons Learnt from other Partners

Lesson: Using DataToCare e-health platform provides access to real time Tuberculosis results.

Evidence from the implementation of DataToCare platform has shown that laboratory sputum test results can be transmitted in real time to clinicians and other staff, shortening the turn-around time to within 24 hours so

that patients are linked to early and prompt treatment that cuts down on transmission of TB infections at household and community levels. Early diagnosis and treatment results in reduced TB morbidity and mortality too. This funding request will support a scale up of DataToCare in all GeneXpert machines.

Lesson: Improved DR-TB patient Care and support can lead to high treatment success rate

The 2016 Independent Program Review (IPR) recommended the discontinuation of the admission facilities because DR-TB patients were mixed with other patients in general wards. Isolation, infection prevention and control measures were not possible. Through partner support admission facilities were renovated at UTH (Lusaka), Kabwe and Mansa in Central and Luapula Provinces, respectively. Two more are being built in the Copperbelt and in Western provinces. The admission of DR-TB patients has improved on adherence to treatment, retention of patients on treatment and contributed to an increase in treatment success rate. Additional MDR-TB admission wards are required in 2 provinces (Southern and Eastern province) to meet the national demand and laboratory space in the same 2 provinces for the 2 LPAs is also required.

Lessons learnt in Strengthening Systems for Health

Lesson: Investing in human resources for health, particularly the frontline workers, improves access and quality of care in rural settings

CHAs play a critical role in the communities, providing a wide range of preventive, basic curative, and referral services. Similarly, the involvement of TB treatment supporters at community level in the current grant translated into increased active case detection of TB, adherence to TB treatment and referral from communities to facilities. The current Global Fund support complements the healthcare staff deployed by government to provide services in rural areas which, as noted in the context analysis, are understaffed and thus addressing the urban/rural imbalance in access to quality healthcare. The HRH gaps are compounded by a number of factors, these among them include limited government treasury authority to create vacant positions, the low outputs from the training institutions and the skills gap in the job market.

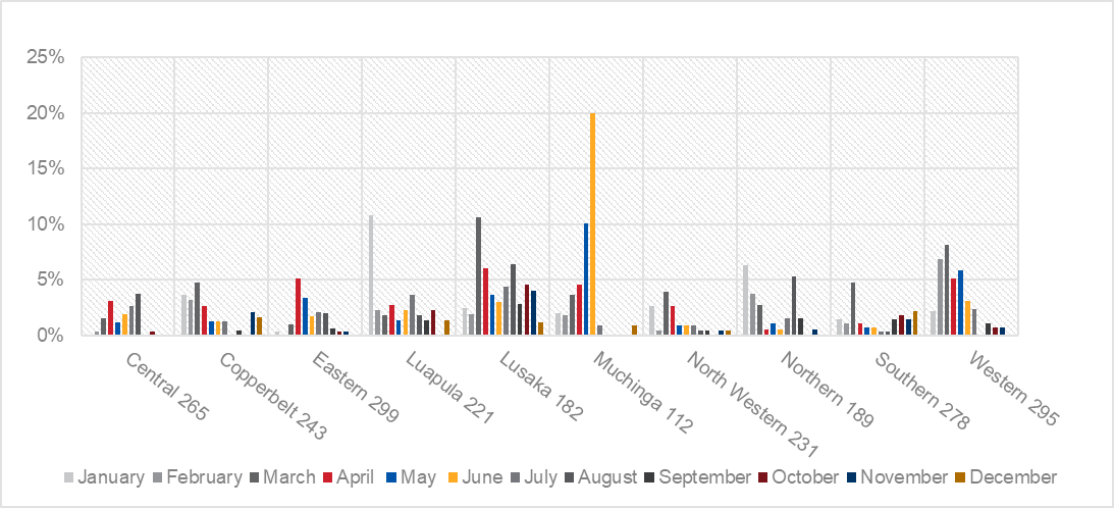
An analysis of the current annual average of employment numbers for Registered Nurses (2,609) and Clinical Officer General (363) indicates that Zambia may have close to 4,462 (COGs) and 13,168 (Nurses) on the labour market who will remain unemployed by 2021 (National Training Operational Plan 2019 to 2024). However, government has continued to engage various cooperating partners such as Global Fund to support the HRH gaps. This funding request seeks to support frontline health workers such as Nurses, Biomedical Equipment Technologists and community based volunteers to provide integrated health services. It should be noted that the Government is currently planning a harmonization of incentives for community based volunteers that are supported by various cooperating partners.

Lesson: Focused technical and financial support to distribution hubs improves last mile distribution performance

In the current implementation arrangement, Global Fund resources have been used to support the operations of the three hubs, Kabompo, Choma and Chipata. The support includes locating technical officers in the hubs to transfer skills to MSL staff and support the development of hub system for warehouse management and last mile distribution. The hubs supported in this way routinely scored higher on achievement of distribution schedules than non-supported hubs. This resulted in better product availability in health facilities served by these supported hubs compared to others, as seen in results for Eastern, Southern and North-western provinces in figure 2 below. Funds on this application will be used to continue current support to the 3 hubs and an additional 2, Mongu and Mansa.

Government funding to MSL is not adequate. Therefore, the need to supplement this investment to maintain MSL operations. In the long term and as provided under the ZAMMSA Act, the agency will be able to mobilize financing through PPPs and other ventures in order to be more self-sustaining. The funding requested under this grant is meant to give support while Government deals with the cost of conversion and to allow a period for the entity to build up fund mobilization initiatives.

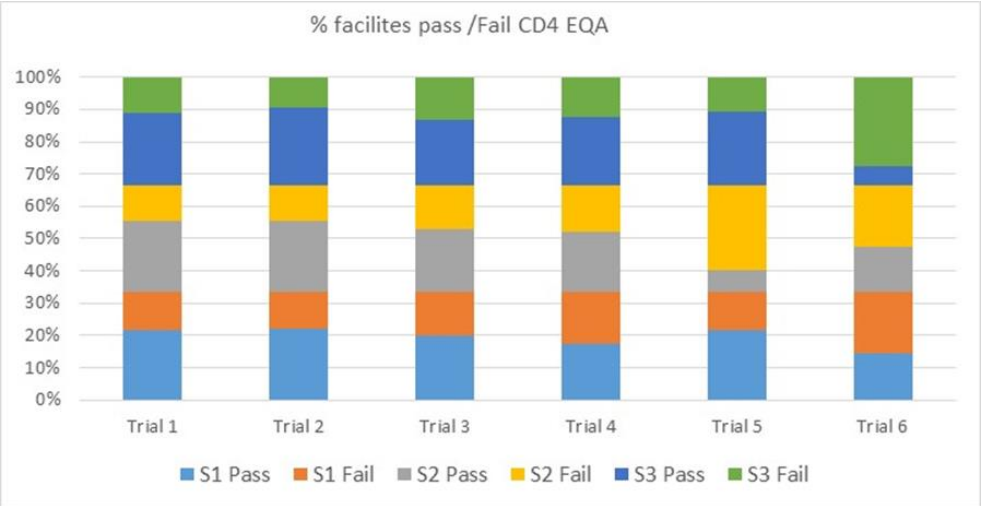
Figure 22: Health Facility Stock Outs Rates for Malaria Medicines 2018



Lesson: Laboratory accreditation and participation in external quality assurance (EQA) contributes greatly to improvement of quality of lab services contributing to improved outcomes for patients

The experience of accreditation of 5 laboratories and enrolment of laboratories in EQA in the public health sector has shown that if a laboratory is to achieve accreditation, there should be commitment and strong leadership from both laboratory staff and facility management as well as regular site visits and strong mentorship. Selected laboratories enrolled in EQA schemes have shown improvement in quality results through corrective action. This is illustrated in the figure below which shows that following procurement of EQA CD4 tests for 133 facilities, performance in CD4 EQA based on 3 samples for each trial was satisfactory for most labs except for trail 5 where most labs did not pass. This funding request prioritises improvement of lab quality assurance through capacity bottlenecks such as infrastructure and equipment, participation in quality assurance schemes.

Figure 23: % of facilities passing and failing CD4 EQA for each test train in 2019



Lesson: The Community ART Access Points (CAAPs) established as part of community led HIV treatment Differentiated Service Delivery in Eastern province has increased adherence to treatment and improved linkage to care especially for key populations

Investing in support of Community-led Response Coordination Centres (CLRCCs) to provide oversight over Community ART Access Points will strengthen and enhance linkages to services, retention in care, ensure coverage of LTFU cases in HIV and TB and monitor pharmacovigilance of HIV patients accessing services from the CAAPs. Through the CLRCCs, community led cadres will create demand for VL services, improve literacy levels about VLT including interpretation of results. The CLRCCS will compliment government efforts aimed at achieving better health outcomes among people living with HIV.

Section 2: Funding Request and Prioritization

2.1 Overview of Funding Priorities

This section summarises the approach used for prioritization of modules and interventions including: (i) How these prioritized modules ensure the highest possible impact with a view to ending the epidemics of HIV, and TB; and (ii) How challenges, barriers and inequities, including those related to human rights and gender, are being addressed through the modules prioritized within this funding request.

The prioritization of funding priorities was done through a consultative approach and using evidence on the epidemic and programmatic response gaps. The country convened a programme review meeting involving stakeholders from public sector, civil society and development partners on 20th March 2020 during which the situational analysis, key achievements and outcomes and gaps as well as priorities for Global Fund support for HIV, TB and RSSH identified. Technical teams (writing teams) were set up to lead the funding request development process building on identified gaps and initial recommendations of the funding priorities. The teams comprised of provinces/districts heads, civil society, TB survivors, people living with disability, PLHIV, Key Populations and NGOs. Consultations were held within these teams throughout the process. CCM Strategy and Programme Committee reviewed the funding request and provided input to the CCM, which was incorporated into the funding request to reflect concerns and needs of all constituencies. The final Funding Request is, therefore, a product of a wide consultative process.

The criteria considered in selecting funding priorities are as follows:

1. Sustaining gains made in HIV treatment –About 1 million out of 1.29m PLHIV are on ART. The country prioritised sustaining the gains made in treatment through provision of life-saving drugs and related medical supplies while taking into account funding available from PEPFAR and Government. US$106,436,238 is earmarked to sustain PLHIV on life-long treatment and management of co-morbidities to improve their quality of life and reduce mortality.
2. Reduction of new HIV infections: The country is off-track towards achieving the 2030 target for reduction of new HIV infections. The country prioritised interventions to accelerate the reduction of new infections by focusing on vulnerable and key populations most affected – AGYW and male partners, men 25 years and older, women 25-29 years, and key populations. Programmes aligned to the key pillars of prevention, were prioritised – Prevention for AGYW, condom programming, prevention for key populations prevention among men and VMMC. US$42,827,700 is budgeted for primary HIV prevention.
3. Other programmes were prioritised to address critical aspects of the epidemic: HTS was prioritised as a key programme for attaining the first 90% target and as key entry point to both treatment and prevention services. PMTCT is also critical in sustaining the gains made in reduction of mother to child transmission and supporting the country to achieve elimination of MTCT by 2023. US$7,629,967 and US$4,053,564 is budgeted for both programmes respectively.
4. RSSH interventions were prioritised based on the need to sustain gains made by the programmes, increase access to services and improve service quality. A systems approach was used to prioritise modules for RSSH. HMIS&M&E was prioritised to improve routine reporting, generate evidence to inform programming and improve programme and data quality. Laboratory systems interventions focus on areas of benefit to all programmes; Interventions for integrated service delivery were prioritised to improve quality of care and programme performance. Investment in health sector governance and planning, and financial management were prioritised to improve coordinated programming at district and lower levels as well as financial accountability across TB, HIV and Malaria. Community systems strengthening were also prioritised to enhance the community response to increase access to services by addressing inequalities and as a key measure for sustainability. US$44,967,580 is budgeted for RSSH.
5. Prioritisation in the TB modules was guided by the need to:
    a. Close the gap in finding missing people with TB. The country priotising a scale up of intensive and active TB case finding using all care providers at community and health faciltiies; and expanding diagnostic capacity in line with WHO guidelines as well as strengthening the data system to ensure all identified cases are notified. Key populations were also taken into account in this prioritization. The aim is to achieve national targets for case notification.

b. Provision of life saving treatment to those diagnosed with TB through ensuring anti-TB drugs and other medical supplies for both DS and DR TB are available. The aim is to sustain and further increase the current treatment success rates,

c. Continued management of TB/HIV co-infection through prioritizing TB prevention among PLHIV as well as provision both HIV and TB treatment to those co-infected. TB diagnosis, preventive therapy and treatment was taken into account in prioritizing this module.

2.2 Funding Priorities

The tables below detail each prioritized module proposed for Global Fund investment in HIV, TB Resilient and Sustainable Systems for Health (RSSH).

COMPONENT: HIV

Module 1	**Prevention – Adolescent Girls and Young Women and their Male Partners**
Intervention(s) & Key Activities	This funding request prioritises interventions for increasing knowledge and awareness of HIV risk, sexual behaviour change including condom use, increased access to SRH and HIV prevention services, access to treatment and empowerment of AGYW. **Intervention 1: Comprehensive Sexuality Education (CSE) -** This funding request will scale up focussed CSE targeting in- school youths in 10 000 primary and secondary schools in 116 districts of Zambia, and out of school youths from the current 36 supported districts to 59 districts in Zambia, with varying intensity of delivery depending on HIV incidence rates. A million learners from 14 to 18 years will be targeted in school, while close to half a million will be targeted among youths out of school with this intervention. Specific activities will be supported are as follows: **In school AYPs: Focused HIV Prevention messaging delivered through extra-curricular platforms in all schools.** Activities to be supported include (a) Capacity building of guidance teachers (in-service training); (b) Capacity building of learners to enable them lead peer-led sessions; (d) Piloting of e-learning platforms for guidance teachers to facilitate knowledge transfer; (e) Formation of school clubs to create out of class focused CSE delivery; (f) Sensitization of parents, guardians and communities to increase acceptability of CSE; and (g) Linkage to SRHS in safe spaces (Youth Friendly centres) and health facilities to meet demand for HIV/SRH services generated through CSE **Out of school Youths activities** will include (a) Scale up of on-going CSE in high incident districts using CSOs and FBOs platforms; (b) Capacity building and retention of peer educators; and (c) Introduction of layered SRH and HIV services in youth friendly centres. **Intervention 2: Social Behavioural Change Interventions –** Behaviour Change will be delivered for in and out of school youth through three approaches: 1) adaptive leadership and 2) media platforms. 3) Other SBCC approaches through drama and print IEC materials. Expert will be engaged to guide the health sector in design and delivery of digital media platforms responsive to the needs and preferences of targeted youth. To operationalise these approaches, funds are requested to support: • Adaptive Leadership (AL) – support will be provided to build capacity and leadership of community stakeholders in 20 districts out of the targeted 40; strengthen the holding environment; coach communities to develop locally designed and owned interventions, conduct community monitoring of interventions which will include gender transformative HIV and GBV prevention strategies. AL strategies will target AGYW and boys and men and women at highest HIV risk in the wake of emerging incidence data. • Media platforms for HIV risk education: The country will change the way media platforms are used to disseminate information and engage adolescents and young people (including persons with disabilities) in HIV prevention. Digital expertise will be engaged to lead implementation of SBC using medial platforms focusing on content development and strengthening coordination of different platforms. **Other SBC activities: Funds are requested to support** (a) Training of peer educators attached to schools; (b) Training of HIV service providers who will implement SBC to improve

	quality of messages; (c) Auditing the quality of content/ messages; (d) Conducting inter-generational community dialogue meetings; (e) Developing video drama to be used by community educators; (f) Producing IEC materials including braille for the disabled; and (g) Scaling up community champions (matrons and patrons). **Intervention 3. Social protection and economic empowerment** Support for in-school youth: Funds are requested to support 5429 AGYW and boys with school fees, examination fee and 9554 girls and boys with living stipends. These will include the 5429 AGYW and boys currently supported by GF grant and additional 4125 OVCs under the Ministry of General Education Keeping Girls in School program who do not have living stipend support. Disability will be one of the criteria to be considered in selecting AGYW for support. This will complement 16 500 AGYW supported through World Bank support and those supported through DREAMS (16 508) support in 13 districts. In addition, the support will provide safe boarding spaces for 1 660 girls that come from far off places as weekly borders through transfer to boarding school facilities (Identification & repatriation of girls) and rehabilitation of old structures into boarding facilities. Support for the out of school youths will include provision of youth apprenticeship and vocational training in collaboration with the Ministry of Youth Sport and Child Development. Out of school youth and youths who have not been to school will be trained on vocational skills in 12 youth resource centres located in the 59 high HIV incidence districts. Funds will be utilised to support remodelling and equipping existing centres for use; assessment for appropriateness of skills to be delivered; equipping the centres and supporting vocation training. **Intervention 4: Scale up of integrated adolescent and youth friendly services** constituting STI and HIV (condoms for dual protection, HIV testing, PEP, VMMC, ART, and STI screening and treatment) TB, NCDs and mental health: Less than 50 % of the health facilities offer adolescent and youth friendly health services (AYFS). Funds are requested to scale up AYFS in 59 districts through supporting (a) Training 800 HCWs in AYFS; (b) Establishing spaces for AFYS in health facilities in 59 high HIV burden districts; (c) Conducting monthly integrated outreach health services in 59 districts; (d) Conducting AYFS quality assessments in all districts; (e) Providing layered HIV and SRH services in 12 youth resource centres; and (f) conduct outreach services to communities and tertiary education institutions in the 59 districts **Intervention 5: Reduction of Sexual and Gender Based Violence, Stigma and Discrimination:** This funding request will support prevention and response to SGBV in 10 high burden districts (as per ZDHS 2018). This will complement support provided for GBV by other partners. For instances, CHAZ has supported CSOs and FBOs (CHEP, CCZ, FAWEZA, KAFHI, Child Fund, DAPP, ECR, and Hope Worldwide) to establish men's networks, training and supporting Paralegals and training Community Leaders in 20 Districts. World Vision, with USG support also supports SGBV programming. Support under this funding request will focus on: • Establishing 10 one stop service centres in high GBV prevalent areas intersecting with high HIV incidence areas. • Raising community awareness on GBV prevention and care including legal redress. • Building capacity of 120 community volunteers and providers (i.e. community volunteers, Para-legal volunteers, community leaders, youth leaders, Community Crime Prevention Unit (CCPU) • Building capacity of 100 health workers (5 in each of the 20 districts) to provide essential post-violence healthcare • Providing GBV survivors with legal and logistical support to seek legal redress **Intervention 6: Monitoring, Evaluation and Research to promote evidence based integrated AGYW programming-** Funds are requested to support: (a) Integration of standardized age and sex data tool into the DHIS 2 system; (b) Undertaking quarterly data reviews and conducting routine monitoring in the 59 high HIV incident districts; (c) Supporting surveys & longitudinal studies to inform programming; (d) Supporting IT

	infrastructure and data needs for real time reporting; (e) Support training and mentorship of staff implementing programs and collecting data; and (f) Review the current adolescent health strategy as well as develop a new strategy for the period 2022-2026 **Intervention 7: Coordination –** Strong coordination of the AGYW programme is required for effective implementation. MoH will lead the coordination of all key players in executing AGYW interventions at all levels, leaving no one behind and involving all stakeholders. Funds are requested to support national coordination meetings with youth networks; functioning of AGYW; AGYW programme coordination at province and district levels and holding annual national AGYW programme forums.
Priority Population(s)	• In-school youth in secondary schools • Out-of-school AYP facing HIV vulnerabilities • Adolescents and young people in correctional facilities, refugee camps, and childcare institutions • Adolescent with special needs including the deaf, visually impaired, who • Pregnant and breastfeeding AGYW and AYP living with HIV • KPs such young female sex workers
Barriers and Inequities	• Adolescent girls and young women are economically disadvantaged and consequently vulnerable to exploitation. The path from the point of vulnerability to being empowered predisposes AGYW to immense risks which can only be dealt with through creation of a strong holding environment[36]. • Health system barriers facing AYP in accessing services include negative attitudes by health workers, lack of privacy and confidentiality in health facilities, long distances to health facilities continue to pose challenges. Efforts to scale up adolescent friendly services including values clarification and training for health workers have been proposed to mitigate the health system barriers • Stigma and discrimination still exist at various levels for people living with HIV[37] including ALHIV in schools and communities. Community sensitisation and social mobilisation interventions aimed at transforming attitudes will continue to be implemented to address stigma reduction • Gaps in knowledge and limited personalized risk perception: Knowledge of HIV among adolescents and young people remains low, affecting social behaviour change. This funding request seeks to increase knowledge of HIV risk factors and HIV prevention.
Rationale	**Comprehensive sexuality education and Behavioural Change Communication**: A recent review of CSE and BCC interventions revealed that these interventions have not yielded desired impact as most indicators remain stagnant or with dismal improvement[38]. This is attributed to factors such as poor implementation modalities and limited geographical scope. The design of CSE and other BCC interventions will be informed by user preference as well as being driven by the youth themselves. **Social protection and economic empowerment:** Proposed social protection and economic empowerment interventions will reduce vulnerabilities of AYP to HIV. This intervention will also allow to keep girls in school which is an important protective factor against teenage pregnancies, child marriages and overall poor health[39]. **Adolescents and youth friendly services:** This intervention has been selected to address the negative attitudes of healthcare workers, stigma and discrimination and unfriendly services are some of the barriers to be addressed through a scale up of AYFs. **Sexual and Gender Based Violence and stigma reduction:** One Stop Centres are proposed to provide integrated services for survivors as evidenced by a survey that found that over 85% of SGBV survivors reported satisfactions with services provided at OSCs[40].

[36] Adaptive Leadership Principles, 2019
[37] Biemba et al, 2019)
[38] Analysis of HIV and SRH- related risk and vulnerabilities of adolescents and young people in Zambia, NAC, 2020
[39] UNAIDS, 2020
[40] World Vision 2018).

Expected Outcome	Percent of Adolescents aged 15-19 years with Comprehensive HIV Knowledge increased from 40.5% in 2019 to 95% in 2023 for females and 38.6% in 2019 to 95% in 2023 for males.
Expected Investment	Within Allocation: US$ 22,047,345 Above Allocation: US$ 12,193,942

Module 2	**Prevention – Condom Programming**
Intervention(s) & Key Activities	**Intervention 1: Procurement of condoms and lubricants –** The estimation of national condom targets in line with anticipated condom scale up shows an increase of male condoms required from 83,505,971 in 2021 to 133,008,149 in 2023 (59% increase) whereas female condoms will increase from increase from 843,495 pieces in 2021 to 7,000,429 pieces in 2023 in the same period. Other partners (AHF, USAID and UNFPA will support procurement of all condoms required for year 1 and part of year 2 and 3. Funds are requested to procurement 41.2M male in year 2 and 54.1M male condoms in year 3. Funds are further requested for procurement of all required lubricants and 16,240 condom dispensers. With improved accessibility to condoms through heightened sensitization that will address behaviour change which have been lacking in the previous years, it is expected that demand and usage will significantly increase. On female condoms, a strategy to increase use through strengthened demand sensitization has been outlined in the National Condom Strategy and activities as well. **Intervention 2: Strengthening of Supply Chain and last mile distribution of commodities –** Condom supply chain from province to district to community level is not well defined and last mile condom outlets at community level are limited making access to condoms difficult[41]. Funds are requested to strengthen last mile supply chain and community level condom outlets countrywide. Each priority population will have sites managed by gender and age appropriate service providers with adequate training. Funds are requested for: • Establishment of community level distribution points tailored to respond to vulnerable and key populations (Adolescents and Young People, men, MSM, FSW, PWID among others) • Establishment of storage facilities for commodities in all districts • Carry out decentralized hotspot mapping for KP and AGYW in 60 selected districts by the DACAs for saturation and report compilation and printing • Conducting market intelligence to support the development of total market distribution strategies through social market and increased participation of private sector. • Consultancy to develop TMA guidelines -Local consultant • Stakeholder consultation for the Development and validation of TMA guidelines • Conduct dissemination and mentorship for the national, provincial and district staff and other stakeholders in coordination on TMA guidelines and operationalisation and review of implementation • Operation support towards quarterly Reviews at district and provincial level and condom distribution among stakeholders (TMA) • Training of community condom and lubricant distributors in all districts (CSOs, CBOs, WDCs peer and other networks, shop owners etc) • Establishing condom and lubricant distribution data system and tools and train all distributors on how to use them • Conducting market intelligence to support the development of total market distribution strategies through social market and increased participation of private sector. **Intervention 3: Condom and Lubricant Demand Creation** Condom and lubricant use has consistently remained low since 2001[42]. Funds are requested to scale up demand creation to increase uptake in line with increased distribution of condoms

[41] Revised National AIDS Strategic Plan 2021-2023
[42] DHIS 2001/02, 2007, 2013/14 and 2018

	at community level. The programme will increase comprehensive condom knowledge among vulnerable and key populations to address condom myths and misconceptions and increase condom uptake. Support will be provided for interpersonal and targeted communication strategies within allocation including individual (interpersonal) and group health talks, build messaging and use of print media, IEC materials and use of interactive social media platforms. Activities for demand creation for condoms and lubricants for KPs are included in the KP module. Support will also cover expansion of condomise campaigns in the 10 provinces in selected high burden incidence districts; design and develop Female Condom specific messages and campaigns, print and distribution to all districts (Young Smart and Safe); consultation meetings with PWD on the process of material development in 10 provinces; Consultancy for development of materials for persons with disabilities (Sign Language and braille); Printing of materials for PWD. Activities for demand creation for condoms and lubricants for KPs are included in the KP module. Demand creation strategies will also utilise existing campaigns such as Zambia Ending AIDS and Young Smart and Safe and it will also benefit from synergies with prevention interventions in the AGYW and men modules. In addition, demand creation activities are integrated under prevention combination that include use of social media platforms. The condom programme will also strengthen integration of condom uptake among family planning users, PrEP and VMMC and treatment clients. In above allocation, funds are requested; condom promotion using print media; and IEC materials will be expanded. Support will also be provided for edutainment communication channels including use of roadshows and drama as well as community radio programmes. **Intervention 4: Management, stewardship and monitoring of the national condom programme –** As indicated in the lessons learnt, condom coordination of the condom programme is fragmented and there is no clear leadership at all levels[43]. Monitoring is also weak resulting in lack of quality data on condoms distribution and uptake as well as condom market intelligence. Funds are requested to: • Establish and support functioning of a multi-sectoral Condom Technical Working Groups (TWGs) at national, provincial and district levels. • Building the capacity of NAC to coordinate the condom programme through capacity building trainings and personnel support. • Strengthening of Monitoring and Evaluation (M&E) through standardization of data collection tools to facilitate for the linkage of all condom and lubricant data to national systems (i.e. NACMIS, eLMIS & HMIS). The budget appears in the overall HMIS module. • Conducting routine monitoring (including routine data quality assessments and improvement) routine data collection alongside service delivery; and operations research • Conduct Capacity building training for NAC staff including PACAs on various management protocols and National Strategy and review on implementation progress
Priority Population(s)	i) Adolescent girls and young women to address low condom use among young people to reduce HIV infection among young women and young men ii) Men in high prevalence settings including long distance truck drivers passing. inter-town/intercity bus drivers, migrant workers on the mines and farming areas and men in social and work places iii) Key populations including men who have sex with men; Transgender people; Female Sex workers and their partners iv) Orphans and vulnerable children (including street children) who are also increased risk of HIV infections v) Other vulnerable populations: People living with disabilities, Marketeers, call boys.
Barriers and Inequities	This funding request aims at increasing access to and use of condoms by addressing key barriers and inequalities that limit access and use such as;

[43] National Condom Strategic Plan 2020-2023

	(i) Limited knowledge about the triple benefit of condoms: The program will aim to increase knowledge, especially among adolescents, young and adult women thereby increasing the demand for both male and female condoms. (ii) Existing gender inequalities: This poses a challenge for young girls and women to negotiate for condom use with their male partners. The program will address gender inequities by implementing a range of behaviour change interventions that will also address the power differentials between them (iii) Inadequate space in health facilities: This makes it difficult to adhere to strict confidentiality when providing SRH services, especially to young people. This is compounded by the lack of integration of condom and lubricant programming with other health services. This program will ensure that young people access condoms in safe spaces, preferably within the community.
Rationale	Interventions in this module have been selected because of their potential to increase condom uptake and use. 1) Strengthening of Supply Chain and last mile distribution of condoms: Condom distribution needs are only met by 45% in Zambia. There is a lack of community structures and mechanisms to distribute condoms which makes condom inaccessible to vulnerable and key populations. As indicated under lessons learnt, addressing supply chain and last mile distribution challenges is critical for increasing condom uptake. 2) Promotion of condoms (male and female condoms) and lubricants is essential in increasing demand for condoms and lubricants to improve condom uptake. Current low condom and lubricant utilization is partly due to gaps related to sensitization on condoms and lubricants and their consistent and correct usage as evidenced by the limited uptake, especially of female condoms. Low condom use is also attributed to a lack of effective and innovative community-driven programmes and strategies to create demand and distribute condoms and make them easily accessible by young people[44]. 3) Management, stewardship and monitoring of the national condom programme: Weak leadership and coordination of the condom programme has contributed the challenges in condom distribution and inadequate condom promotion. This investing in strengthening coordination and leadership is critical for implementation of the proposed condom programming activities in this funding request as well as the overall condom strategy.
Expected Outcome	Percent of women and men aged15-49 who had sex in the past 12 months with non-regular partner, reporting condom at last sex increased from 35% in 2019 to 95% in 2023 and from 54% un 2019 to 95.5% in 2023 respectively
Expected Investment	Within allocation: US$ 6,273,066 Above allocation: US$ 4,093,622

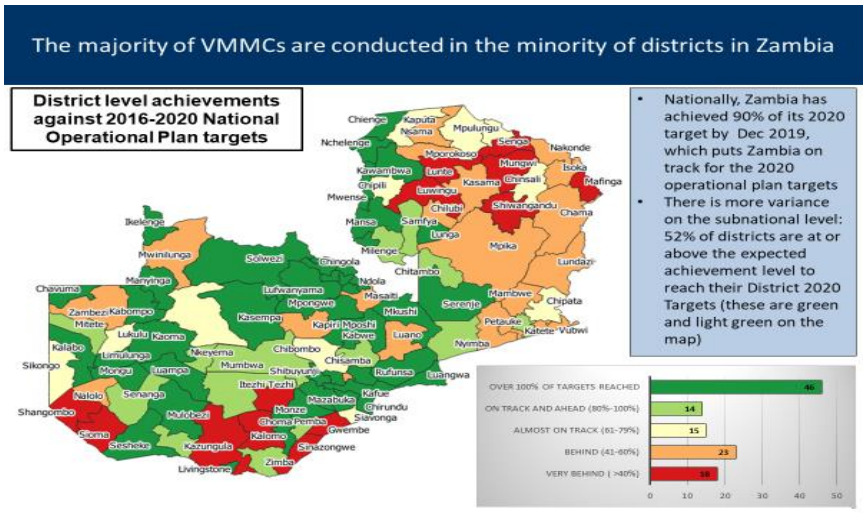
[44] Zambia National HIV Prevention Coalition Roadmap, results of the stocktaking exercise, Sept, 2017

Module 3	HIV prevention – Key Populations Programme
Intervention(s) & Key Activities	1. **Data generation – Surveys:** funds are requested to undertake: • Key Population Size Estimates Study – The estimation of population sizes for MSM, PWID, TGs and FSWs will inform estimation of future course of the epidemic among these populations and support policy formulation and programming. • Integrated Biological and Behavioural Survey (IBBS) for Key Populations to measure the HIV burden, risk factors, programme coverage as well as encompass parameters on HIV stigma indexes. Findings will strengthen HIV policies and programmes and provide baselines for key indicators. **2. Health service provision-** To scale coverage of and access to services, funds are requested to: • Increase the number of health facilities providing services to FSWs, MSM and TGs. The 2 existing facilities in the current districts (Livingstone and Lusaka) will be maintained and additional KP-friendly facilities set up in other provinces. As part of the sustainability plan, some new Trusted Access Platforms will include placing designated staff at existing GBV/CSA One-Stop Centres situated at several health facilities in the country. This will guarantee equitable access to services by KPs across the country, particularly FSWs who are widely distributed geographically, have the highest HIV burden and are key drivers of the epidemic. Clients will also benefit from a stigma-free and safe environment to report GBV cases and access psychosocial counselling services. In addition, non-availability of data to assist in fully understanding the sizes of most of these populations in Zambia has made it challenging to inform effective planning. However, the country intends to conduct the surveys above to inform programming. The programme has developed the draft Consolidated HIV Prevention and Treatment and Care for Key Populations which will provide guidance for planning, delivering, monitoring and evaluating HIV prevention, diagnosis, treatment and retention interventions for each KP. Public health care workers will be orientated on the guidelines to address stigma, HIV prevention discrimination and retention in facilities across the country. Strengthen access to harm reduction services for PWUD and PWID – funds are requested integrate SRH, HIV, STI and TB services into mental health and rehabilitation facilities in 2 districts (Lusaka and Ndola). Additionally, support will be provided to the facilities to strengthen or establish Opioid Substitution and/or Methadone Maintenance Therapies. To enhance risk reduction, the funds will be utilised to: • Recruit necessary staff to be stationed at the facilities, adequate resources, medical supplies and equipment to enable the facilities to function accordingly • Engage peer educators, who shall act as community health volunteers (who earn a stipend),, from KP communities to be stationed at health facilities. Similarly, older MSM will be recruited to reach hard to reach older MSM. Peer educators will offer HIV self-testing, HIV/Syphilis Dual testing, PrEP and PEP including condom and lubricant demand generation and distribution. Health facilities will conduct community outreach services in close collaboration with KP CSOs as part of community interventions. • Providing HIV, TB, SRH, including VMMC, and Hepatitis screening, testing services, risk reduction and post prison integration to inmates through prison health system. • Training of all healthcare staff and peer educations on values clarification along with the necessary orientation to enable them to provide non-discriminatory services. **3. Strengthening coordination** Funds are requested to strengthen the National HIV/AIDS/STI/TB Council (NAC) **capacity to coordinate the KP programme**. Funds will be utilised for data analysis recruitment of appropriate staff, conducting relevant trainings, facilitating stakeholder meetings, and sharing information; development of District Coordination Toolkit to guide the multisectoral response to KP activities; and orientation of District AIDS Coordination Advisors (DACAs) on this toolkit. Further support will be provided to conduct regular supervisory and mentorship visits to health facilities in collaboration with relevant CSOs. Annual review meetings (bringing stakeholders together) will also be carried out to evaluate implementation and progress towards achievement of programme results.

	4. Strengthening Monitoring and Evaluation Existing M&E systems have largely been developed to cater for Zambia's generalized epidemic. Data collection for M&E of KPs is done in an ad-hoc fashion. To improve KP M&E systems, funds are requested to: • Provide technical assistance to integrate KP data into the Activity Reporting data tool and to incorporate KP indicators into the online NACMIS. • Orientation of DACAs on the upgraded on-line NACMIS and support of KP service delivery and HIV prevention programmes; establishing a regular communication mechanism to address system problems; and provision of appropriate supplementally guides, training materials, and other sources of technical information to aide system use. • Finalise the existing draft KP M&E Framework along with the relevant data collection and reporting Tools • Support for civil society to undertake community-led monitoring to provide oversight in programme implementation; monitor availability of commodities such condom and lubricants, PrEP and HIV self-testing kits; analyse data and give feedback on the quality of service. This will include conducting a client satisfaction survey. • **Demand creation –** Support is requested to (i) conduct community dialogue to raise awareness among KP community and community leaders on HIV services and to discuss their concerns and identify solutions together with service providers, policy makers and civil society organisations; and (ii) development and printing of IEC materials to enhance knowledge, encourage modification and adoption of positive behaviour change. Social media platforms such as Whatsapp and closed Facebook groups will also be used for demand creation and networking. • **Capacity building –** to improve programme implementation capacity, funds are requested to train CSO on organisational management, policy and programme implementation; train healthcare workers and peer educators to improve knowledge and attitudes towards KPs; sensitise law enforcement officers to address issues of stigma and discrimination, human rights and violence to increase access to HIV services; train correctional health workers to HIV service provision to enable them provide HIV care in prisons; and sensitise of Civic and Traditional Leaders to reduce the stigma and discrimination often directed at KPs can encourage community support. Further, training will be conducted on the Minimum Package of Services to educate and equip public health facilities staff with the knowledge and skills to enable them to provide health services that meet healthcare needs of KPs. Additional training will be conducted for law enforcements and judiciary to address human rights in the context of HIV. Various cross cutting gender and human rights issues have been addressed in this write-up. 5. **Community empowerment** – to empower KP communities, the funds are requested to support: (i) establishment and functioning of KP programme Technical Working Groups (TWG) to provide strategic leadership in the development, implementation and sustainability of KP health programmes and strategies targeting particular KP type; (ii) development of a Safety and Security Package to address safety and security concerns during implementation of this programme. The package will set out policies and procedures to prevent. Mitigate and respond to threats to KP members. (iii) development of an Advocacy Strategy encompassing two components: policy advocacy to affect policy and regulations directly by influencing governmental institutions and other policy-makers and public advocacy to influence the behaviour, opinion and practices of the public and build support for the desired change.
Priority Population(s)	Men Who Have Sex with Men (MSM); Correctional Facilities Inmates; People Who Inject Drugs (PWID); Trans Gender Persons (TGs); Female Sex Workers (FSWs) and People Who Use Drugs (PWUD).

Barriers and Inequities	Key populations face key barriers and inequalities in accessing services which will be addressed through the above interventions. These include stigma and discrimination in the health system and communities; violence and harassment as well as criminalisation of their behaviour which hinders them from seeking health services.
Rationale	Conducting special studies such as IBBS/ Size estimation, Sero prevalence and Stigma index will help provide credible and robust KP data. This will strengthen the understanding the KP community and provision of evidence-based services, policy change and programmatic interventions to address, access to services, stigma and discrimination. Scaling up access to services will ensure that KPs out of the transport corridor have access to services, particularly female sex workers. Integrating services into GRZ facilities will guarantee sustainability of the programme. Capacity building will support the scale up of DSD models and improve retention (reduce loss to follow-up), improve efficiencies and sustainability in provision of ART programme among KP groups and their clients. Capacity building of services providers, KP CSOs and KP peer educators will strengthen interventions that will improve demand creation and service provision. Strengthening M&E systems will provide credible and readily available data for decision making while providing a better understanding of the trends among KPs.
Expected Outcome	Percentage of female sex workers who received at least two HIV prevention interventions increased from 54.8% in 2020 to 83.4% 78.1% of MSM receive at least two HIV prevention interventions annually by 2023 77.8% of PWID receive at least two HIV prevention interventions annually by 2023
Expected Investment	Within allocation: US$ 5,936,956

Module 4	**Prevention - Voluntary Medical Male Circumcision**
Intervention(s) & Key Activities	**Intervention 1: Scale up of VMMC services** Over 92% of 1,985,082 targeted circumcisions by 2020 were conducted by the end of 2019. 1% of these were aged between 0-2 months, 25% were aged between 10-14 years, 61% were aged between 15-29 years and 8% were aged between 30-49 years. Zambia annual VMMC target is 621,694 in 2021, 639,603 in 2022 and 548,357 in 2023 across all age groups. PEPFAR which is working in 583 (41%) selected facilities in all the ten provinces has committed to support 375,608 circumcisions for the 15-49 years age group in COP20. Hence for 2021 PEPFAR will support 60.4% (375,608) MCs. Leaving 39.6% (246,086) to be supported by funds from this grant and Government. • Funds are requested to procure VMMC commodities and consumables to support provision of service and training of Healthcare in male circumcision surgical skills. • Funds will also be utilized to strengthen surveillance of adverse events through training and support supervision and mentorship to improve quality of services • Support is requested to • This grant will also support an extended national campaign for MC including engaging traditional circumcisers and traditional leaders as client mobilisers • In order to realize the impact of VMMC on HIV Infection support will be provided to integrate MC with HTS and ART to enhance HIV testing and treatment services using the screening tool in VMMC settings. The program will also provide Men's clinic services which includes STI screening, Drug and substance abuse as well as Gender based violence counselling and link them to relevant programs.

	• Other funding support will go towards strengthening central level commodity supply management to increase efficiency in last mile distribution; and strengthen the performance improvement and quality assurance of VMMC services. **Intervention 2: Increasing demand for VMMC services:** This grant will support client-based communication approaches including engagement of traditional leaders as change champions; MC demand creation campaigns in provinces and districts to close the gap in MC coverage; and circumcision campaigns during school holidays. MC will be integrated into Health promotion and women will be engaged to create demand for VMMC and EIMC. **Intervention 3: Strengthening M&E** with a focus on conducting data audits, annual reviews; and orient data clerks to improve data quality. The grant will also support sustainability assessments in all provinces to support the roll out of the transition to sustainability plan.
Priority Population(s)	Males aged 15-49 years (70%), 30-49 (10%), 10-14 (15%) and 0-2 months (5%)
Barriers and Inequities	Barriers to access to VMMC services include inherent cultural beliefs that hinder efforts to scale up MC services; weak sustainability and programme integration; inadequate innovative approaches to engage those below age 15; insufficient support for VMMC campaigns; inadequate resource mobilization and capacity for service delivery and limited program visibility at national and subnational levels. This funding request will address these barriers to improve VMMC service uptake.
Rationale	Although coverage of male circumcision has increased from 13% in 2007 to 32% in 2018, there are variations in the coverage across provinces and districts in the country. Only 52% of the districts are on track to achieving MC targets partly due to some areas being hard to reach, inherent cultural beliefs and inadequate infrastructure and service providers. The figure below shows variations in geographical coverage hence the need to scale up MC service delivery across the country. All interventions above will contribute to this scale up. 
Expected Outcome	Percentage of males circumcised increased from 32% in 2018 to 50% in 2023
Expected Investment	Within allocation: US$ 7,903250 Above allocation: US$ 607,710

Module 5	**Prevention of Mother to Child Transmission**
Intervention(s) & Key Activities	Zambia is working towards elimination of mother to child transmission (EMTCT) of HIV and Syphilis (dual EMTCT). An EMTCT Operational Plan has been developed to guide the EMTCT process. The stacked bar analysis on sources of new HIV infections among children along the cascade of care identified major contributing factors to include mothers newly infected during pregnancy, mothers dropped off ART during pregnancy and mothers

	dropped off ART during breastfeeding period. The focus of this funding request is to support interventions addressing the underlying factors accounting for these cases of MTCT. **Prong 1 intervention: Primary Prevention of HIV in women:** The programme is planning to enhance primary HIV prevention to address the gap of previously negative women seroconverting and contributing to HIV transmission to infants. Sensitisation will be intensified in MCH and other service delivery points on the importance of early antenatal and testing for HIV and STI. Funds will be invested in the implementation of; • Retesting of negative pregnant and breastfeeding women (PBFW) every three months throughout pregnancy and breastfeeding for early identification of seroconverting PBFW and timely intervention to prevent transmission to the infant in utero and during breastfeeding. The retesting will have an emphasis on improving the quality of post-test counselling, linkage to HIV prevention, and care and treatment interventions. This activity will require the development of SOPs and to support all districts with standard operating procedures (SOPs) for retesting of pregnant women. • Pre-Exposure prophylaxis for high risk PBFW especially pregnant and breastfeeding AGYW. Support will be provided for the development of IEC material and revision of SmartCare tools on PrEP in PBFW and training health care workers (HCW) in all the districts, starting with districts with high HIV burden. • Provision of HIV information and education especially on the heightened risk of HIV acquisition (both horizontal and vertical) during prenatal, pregnancy and breastfeeding, in antenatal, delivery and postnatal settings. All districts will be supported with IEC material with priority given to health facilities in rural areas as well as onsite training in high burden provinces. Both IEC content and training will emphasize tailor made approaches for pregnant and breastfeeding AGYW. • The mentor mothers will be trained and supported using approved community training packages to target the adolescents (10 -19) and young women including the 25 – 29 with HIV testing and prevention messages. Other activities will include retesting of negative PBFW and their partners in the community **Prong 3 – Intervention 2: Preventing vertical HIV transmission -** Attrition of HIV positive pregnant women on ART has been identified as one of the biggest challenges in the programme. To close this gap, this funding request will invest in: • Improvement of retention for PBFW on ART through adopting, modifying and scaling up the mentor mother initiative from the 50 health facilities being supported in this initiative by a PEPFAR implementing partner, to all the 2,450 PMTCT facilities initially in the 4 hotspot provinces and the 20 PMTCT low performing districts. This peer-to-peer approach provides an integrated services platform, delivering services along the continuum of care (identification, referral and linkages, retention/defaulter tracing and treatment adherence), at the facility and in the community. The mothers also follow up on mother baby pairs to improve EID uptake. Data from the 2019 selected indicators from 35 facilities implementing mother mentor model initiative showed ANC-1 testing at 88% and linkage to care at 106.5%. • Young mentor mothers will be engaged to address specific peer needs of pregnant and breastfeeding AGYW in PMTCT care. The mentor mothers will track defaulters, provide adherence counselling and return defaulters to care. Cohort monitoring data will be reviewed continuously to identify defaulters. The requirements for the activity include the development and translation into the seven major local languages of IEC material for key messaging, stipends and critical enablers for mentor mothers. • Capacity building for health workforce through on-site training and mentorship to improve quality of care and outcomes in selected facilities in the four hotspot provinces. Mentorship will focus on current suboptimal care in DBS collection and management, treatment adherence counselling, data review to identify defaulters, paediatric HIV care and treatment, AGYW friendly PMTCT service provision, and other areas to be identified through SQA This will require hiring and support of the clinical mentors to provide ongoing training and mentorship to the assigned facilities.

	• Conducting Service Quality Assessments (SQA) to identify bottlenecks in quality PMTCT service delivery to be addressed through capacity building countrywide with a focus on low PMTCT performing districts. Implementation of SQA in two provinces in 2019 in facilities revealed that SQA supports evidence based onsite mentorship and technical support supervision which promotes effectiveness in program planning and efficient use of resources Support will be provided to develop SOPs for SQA. **Prong 4 – Intervention 3: Treatment, care and support to mothers living with HIV and their children and families -** The proportion of HIV-exposed infants receiving a timely virological test for HIV by two months of age remained below 50% during 2010-2016[45]. However, long turnaround times (TAT) and a high proportion of results not returned to caregivers continue to be a challenge. In order to ensure that HEI have timely access to HIV testing, point of care (POC) equipment will be rolled out to 20 low performing districts and 5 remote and hard to reach districts. Funds are requested to**:** • Procure POC EID equipment, development of SOPs for POC EID equipment and support to districts to orient HCWs in the use of POC equipment. • Intensify viral load monitoring for PBFW living with HIV on treatment by promoting literacy through mentor mothers, IEC, treatment education at health facilities, and access to viral load tests as part of the broader treatment care and support interventions for PLHIV. • Syphilis screening in pregnancy has been a challenge country wide, standing at 56% 2017. This has been attributed to testing modalities. With the country having embarked on dual EMTCT of HIV and Syphilis, the programme is working towards the EMTCT target of 95% screening of syphilis in pregnant women. To address this gap, funds are requested to provide dual HIV/Syphilis test kits to increase screening of syphilis in pregnancy. • Implement cohort monitoring system for both PBFW and HIV Exposed Infants from 67 pilot facilities in 4 provinces to 2,450 PMTCFT facilities in all provinces to track mother-baby pair for quick identification of defaulters at each facility. This will be supported by virtual and onsite data audit meetings to review cohort data for PBFW and HEI. • Strengthen community mobilization and sensitization on the importance of PMTCT mothers having their children tested through use of mentor mothers. • Supporting community partners to develop package for orientation and mentorship of CHWs/mentor mothers in intensified case finding through Index testing of exposed children. • Active participation from the programme and integration of PMTCT activities in the national child health week and mobile outreach activities • Support facility based strategies for increasing testing in infants including: (i) onsite mentorship and training of MCH staff on the latest consolidated guidelines; (ii) designing a system of inviting male partner to accompany their spouses for Antenatal clinics to get the health information together and also encourage male involvement in PMTCT; (iii) placing of PMTCT counsellors in outpatient department and female in patient wards to track and test mothers who are pregnant and have not started antenatal; (iv) collection of contact details for mothers for pre- reminders for EID recommended testing Schedule and refill and laboratory monitoring for mothers. **Intervention 5: Key populations -** The programme's strategy is to deliberately reach out to the female key populations (KP) through integrating PMTCT services across all the four prongs by collaborating with KP implementing partners and civil society organisations (KP - CSO) that have already set up safe spaces in the community. In Prong 1. Funds are requested to scale up prevention messages and interventions such as PrEP, safer sex practices, HIV testing, and early diagnosis and treatment of STIs. For pring 2, funds will support access to effective family planning and in prong 3 and 4, support will be provided to coordinate KP implementing partners and CSO, and in training health care providers in

[45] Global AIDS Monitoring Report, 2017

	ART/MNCH in KP sensitivity training to ensure the KP receive care in a non-discriminatory manner. **Intervention 6: Strategic Information -** Accurate, timely and quality data is cardinal to monitoring the performance of the programme. Funds are being requested to invest in improving accessibility and quality of data for decision making and programming. The grant will support virtual data audits and verification of EMTCT focused data reviews; and revision and update of PMTCT SOPs.
Priority Population(s)	• Pregnant and breastfeeding women and infants • Particular focus on pregnant and breastfeeding adolescents and young mothers
Barriers and Inequities	**Stigma and discrimination**: A systematic review of studies on PMTCT in 12 countries that included Zambia, has highlighted how HIV-related stigma and discrimination affects a pregnant woman's decision to enrol in PMTCT programmes and impede access to ARVs, adherence to treatment and retention in care for mothers living with HIV[46]. **Health system barriers** impacting access to PMTCT services include inadequate health workforce, long distances to health facilities, and inadequate infrastructure continue to pose challenges. Negative attitudes of health workers, lack of privacy and confidentiality have also been specifically highlighted by pregnant and breastfeeding adolescents and young women as factors impeding access to SRHR/HIV services[47]. **Geographical inequities persist** in PMTCT outcomes. Data shows that some provinces (e.g. Lusaka and Copperbelt) have a higher HIV burden than others[48]. Furthermore, although some provinces have a lower HIV burden, their performance in some PMTCT programme areas is poorer[49].
Rationale	Evidence from PMTCT cascade modelling show that new maternal infections occur during pregnancy and breastfeeding account for the majority of infections due to MTCT among children. Investment in interventions to keep negative women negative throughout the perinatal period (up to 24 months) are therefore justified. **Retention of PBFW in ART care and strengthen cohort monitoring of mother-baby pairs in PMTCT care:** Cohort monitoring, bringing back and retaining mother-baby pairs who default are therefore remain central to retention throughout the PMTCT cascade of care. A pilot programme implemented in 67 health facilities in 4 provinces has shown promising practices hence the proposed scale up. The use of peer service delivery model such as mentor mothers in PMTCT has also shown promising results. For instance, data from the 2019 selected indicators from 35 facilities implementing mother mentor model initiative showed a universal (100% linkage to care), early attendance to ANC and high HIV testing rates among ANC attendees. **Scale up HIV testing for PBFW and HIV exposed children through introduction of dual HIV/Syphilis testing and scale up Point of Care Testing for EID**: Use of POC EID testing increases EID coverage as shown in lessons learnt. In order to ensure that HEI have timely access to HIV testing, the scale up of point of care (POC) equipment in 20 low performing districts and 5 remote and hard to reach areas is prioritized
Expected Outcome	% of children newly infected with HIV from mother-to-child transmission among women living with HIV delivering in the past 12 months reduced from 3.7% in 2019 to 2% in 2023
Expected Investment	Within Allocation: US$ 4,053,564

[46] International HIV/AIDS Alliance 2014; Prudden et al 2018
[47] MOH and UN 2019
[48] Zambia Demographic and Health Survey, 2018
[49] HMIS data, 2019

Module 6	Differentiated HIV Testing Services
Intervention(s) & Key Activities	**Intervention 1: Scale up of HTS services** To reach and sustain 95% of men and women knowing their HIV status by end of this grant, funds are requested to procure HIV test kits This will also include support for forecasting, quantification and distribution of test kits. This will accommodate purchase of rapid diagnostic test kits for the first year only. The test kits included in the budget will facilitate the adoption of the 2019 WHO HIV Testing Guidelines of having three tests to diagnose a positive case. The Zambian HIV Services are currently being revised and this has been incorporated. The request for the second year has been included in above allocation. The funds will also be used to support visits to all 10 provinces, 4 high burden districts in each province and 4 facilities in each district to assess the implementation of partner notification services and index testing in order identify gaps and provide onsite mentorship. **Intervention 2: Maximizing the usage of the HIV testing screening tool for optimized testing** The grant funds are requested to support visits to all 10 provinces, in 4 high burden districts and in 4 facilities to assess and review the usage of the HIV testing screening tool and provide mentorship to HTS service providers. This will be done every quarter of each year. The funds will also be used to conduct a validation exercise for the HIV testing screening tool to ensure that those that are being screened out by the tool are really those that should not be subjected to an unnecessary test and will provide background for the review of the tool. This will be done in four high burden provinces (Lusaka, Copperbelt, Central and Southern). **Intervention 3: Scale up of HTS targeted outreach services –** Funds are requested to support: (i) Outreach male HIV testing in different settings such as work places and social venues in the 10 high burden districts (Lusaka, Ndola, Kitwe, Livingstone, Mazabuka, Kabwe, Solwezi, Chirundu, Mongu, Nakonde). (ii) Conduct outreach for adolescents and young people targeted community HIV testing for in and out of school youth (in 16 districts in year 1, 22 districts in year 2 and 40 districts in year 3) with high social-economic activities where HIV infection risk is high. The HTS services will integrate a full package of prevention services including a full assessment and access to PrEP. This will be coupled with integration into family planning clinics using an integrated platform for service delivery which will include SGBV/HIV/STI. (iii) Training and equipping respected male peers as service delivery uptake champions in 10 districts Lusaka, Kitwe, Solwezi, Nakonde, Chirundu, Kabwe, Kapiri, Livingstone, Mazabuka and Mongu. **Intervention 4: Scale up of HIV Self-Testing in vulnerable and key populations (HIVST)** The country has rolled out HIVST under the current grant and funds are requested to scale this approach in the next three years particularly for reaching priority populations and key populations. Activities to be supported include: **(i)** Procurement of testing commodities for HIVST (Oraquick) in the first, second and part of the third year of the grant. Additional support is requested in above allocation to civer the year 3 gap. **(ii)** Scale up of community based HIVST through training of 240 volunteers and peers (24 in each district) who will reach out to hard to reach populations such as MSM, SWs and their clients, AGYW as well ensure their linkage to prevention, care and treatment services. This will be conducted mainly in Lusaka, Kitwe, Solwezi, Nakonde, Chirundu, Kabwe, Kapiri, Livingstone, Mazabuka and Mongu. (iii) Sustaining community HIVST distribution shops established in 10 high burden districts (Lusaka, Ndola, Kitwe, Livingstone, Mazabuka, Kabwe, Solwezi, Chirundu, Mongu, Nakonde). The shops are accessed by people who avoid seeking services in health facilities.

	(iv) Making available HIVST data capturing tools including HIVST distribution registers in all provinces, referral cards, HIVST implementation SOPs and job aids.. (v) Conduct assessment on uptake of HIVST and client satisfaction to be done in 10 high burden districts (Lusaka, Ndola, Kitwe, Livingstone, Mazabuka, Kabwe, Solwezi, Chirundu, Mongu, Nakonde). **Intervention 5: Adoption of revised testing algorithm to include third test – funds are requested to:** (i) Support revision of the HTS registers and client forms as well as the HMIS in order to incorporate third test. (ii) Support all provinces and district to conduct onsite cascade orientations on the revised testing guidelines that include a third test in the testing algorithm (from the provinces to the districts to the facilities). **Intervention 6: Targeted HIV Services literacy for AGYW and men** to increase their uptake of HTS and linkage to care and treatment, funds are requested to: (i) Develop and distribute of HTS communication materials including posters, leaflets and brochures to be distributed across all 10 Provinces. (ii) Disseminate information through mass media including advertisements and programmes on electronic media.
Priority Population(s)	• Vulnerable populations including adolescents and young people, women 25-34 years and adult men 25 years and older • Key populations including FSWs and clients and MSM • Mobile populations
Barriers and Inequities	HTS is low among AGYW, men and KPs. This is attributed to the limited adolescent and youth friendly services in health facilities such as opening hours and negative attitudes of healthcare workers; stigma and discrimination facing AGYW and men, and poor health seeking behaviour among men. This funding request will scale up HTS modalities that are appropriate to these populations.
Rationale	HIV Self Testing: HIVST is an efficient way of reaching and scaling up testing to population who avoid health facilities and those who cannot be reached through community based testing such as men, adolescents and young people, key populations, mobile populations as well as sero-discordant couples. A formative research to assess acceptability and preference of HIVST in Zambia also showed high acceptance across all populations groups while the pilot HIVST project conducted by FSH Zambia under the STAR project showed success by distributing about 250,000 HIVST kits. Investment in scale up of HIV screening and index testing increases efficiency in HTS. Given that this approach increases targeted HTS and identification of those HIV positive while reducing the number of necessary tests (Refer to lesson learnt) Investment in the adoption of the third test will as recommended by WHO will enable the country move its HIV testing services in line with the changing HIV epidemic with positivity yields ranging below 5% in the general population to maximize on efficiency.
Expected Outcome	Percentage of PLHIV who know their status increased from 90% in 2019 to 95% in 2023
Expected Investment	Within allocation: US$ 7,629,967 Above Allocation: US$ 13,039,267

Module 7	**Prevention: Pre Exposure Prophylaxis**
Intervention(s) & Key Activities	**Intervention 1: Scale up of PrEP uptake among people at substantial risk of HIV infection**– PrEP was introduced in Zambia in 2017 and is currently offered in about 623 sites. Over 18,000 clients were initiated on PrEP in 2019 with support from PEPFAR. The

	country plans to scale up PrEP uptake with support from both PEPFAR and Global Fund. To support the scale up, this funding request will invest in: • Adherence support including peer-led adherence, peer-led literacy and awareness on PrEP; and strengthening clinical monitoring from community to health facility for the targeted populations such as AGYW, Women 25-29 and their partners, FSW and other KPs • Capacity building for healthcare workers in additional health facilities and GBV one stop centres on screening and clinical monitoring of PrEP clients in spaces where pregnant and breast feeding women access services especially the 25 to 29 age group as well as their partners. • Integration of PrEP in SRH through HCWs on SRH/PrEP service delivery; and integration of PrEP and post GBV health services through training of law enforcement agencies, HCWs and communities • Community-led monitoring of PrEP roll out at community level • Introducing community support structures for clients on PrEP to improve adherence and reduce early discontinuity • Establishing CSO led PrEP Differentiated Service Delivery models • Establish virtual PrEP support clubs • Key Populations peer educators along with KP led CSOs will offer HIV self-testing, HIV/Syphilis Dual testing, PrEP and PEP including condom and lubricant demand generation and distribution in the community and at places of social activities. **Intervention 2:** Enhancing demand creation to increase PrEP uptake using community and health facility based approaches. This funding request will support CSO-led PrEP literacy trainings among people at high risk of HIV infection and community awareness campaigns on PrEP in communities. **Intervention 3:** Strengthen M&E system for PrEP: Funds are requested for the development of PrEP data system including a data management plan, indicators for client level monitoring and monitoring tool; integrating PrEP indicators into the national health information system; enhancing research and routine programme monitoring; and training HCWs in PrEP monitoring.
Priority Population(s)	Populations at substantial risk of HIV infection such as AGYW, Key Populations (FSWs, MSM and PWID), men in high risk settings and pregnant and lactating women aged 25-29.
Barriers and Inequities	• Limited availability of PrEP services across the country with most sites currently concentrated in Lusaka and Copperbelt province • Low PrEP awareness and misconceptions about PrEP hindering uptake of services
Rationale	Implementation of PrEP in the last three years has shown increased uptake from 1,138 in 2018 to over 18,000 in 2019 demonstrating a high level of acceptance of the service. The proposed interventions above (service scale up, demand creation and strengthening data systems) have been selected to enable the country achieve the national target of about 360,000 clients in PrEP by 2023.
Expected Outcome	Number of people enrolled on PrEP increased from 23.626 in 2019 to 359,026 in 2023[50]
Expected Investment	Within allocation: US$ 667,043 Above allocation: US$ 278,141

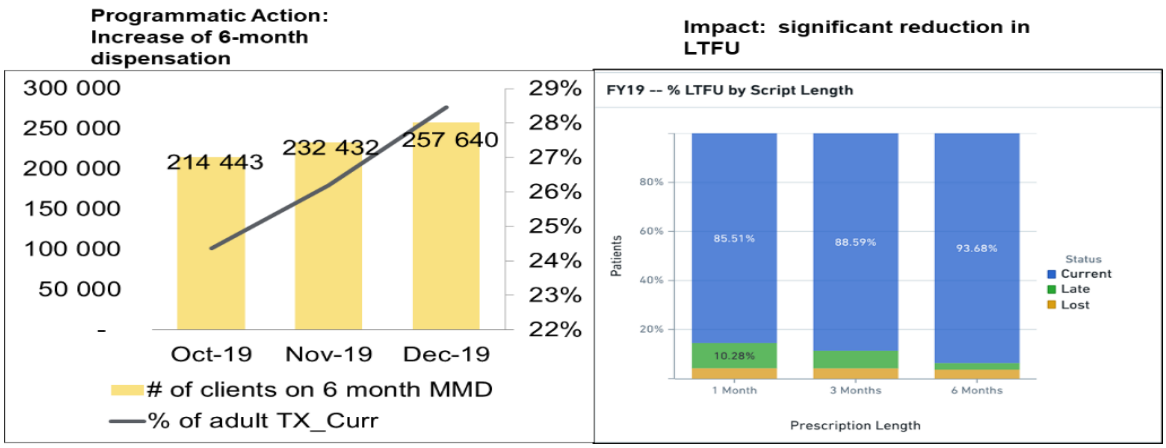
Module 8	**HIV treatment, care and support**
Intervention(s) & Key Activities	**Intervention 1: Differentiated ART service delivery – Funds are requested to:** **Scale-up coverage of DTG based regimens** for the three years. Global Fund will cover 468,182 PLHIV on ART in 2021, 414,327 in 2022 and 353,950 in 2023. A combined Global Fund, PEPFAR and Government support will ensure that country attains 95-95-95 treatment

[50] Note that the outcome for PrEP is not provided in the RNASF hence the use of output target.

	targets. The country targets to have 90% of PLHIV on ART to be on TLD and 4% on TafED by end of 2020 and this will continue as flat proportions in 2021 and 2022. In addition, support will be provided for monitoring the supply chain of DTG/TAF and formulations and dosages for children such as Raltegravir. **Scale up DSD Models for key populations, men, children, AGYW and unstable PLHIV** to increase efficiency in ART services. Funds will be invested in establishing 250 community health posts in 3 provinces (Lusaka, Western and Copperbelt) with highest rates of LFTU and deployment of 2610 adherence supporters currently in place. Additional 150 community health posts are requested in above allocation to reach the national target of 400. Support **national data quality review for active clients** and take remedial data quality improvement action to effectively track the 95-95-95 targets and improve overall quality of the programme. **Rollout of the paediatric change package** to improve paediatric outcomes. This will respond to the poor indices in children across the cascade of HIV care. The paediatric change package is a set of high impact interventions including optimized and simplified regimens, promoting viral load testing and family centered care with social support services. To further improve HIV treatment outcomes for children, **supplementary feeding to clinically malnourished orphaned and vulnerable** CLHIV through provision of food humpers as part of patient centred care. In Zambia, among HIV unexposed children, 17.0% are stunted and 11.5% are severely stunted while among HIV-exposed uninfected children 21.4% are stunted and 26.3 are severely stunted.[51] Support **community based ART** in order to increase cost efficiencies and reduce Loss to Follow Up (LFTU). Community based ART will be scaled up through hiring CBVs to support ART patients at facility level and through Community ART Access Points. Civil society and community groups will provide comprehensive household package to promote DSD approaches for those with advanced disease. Funds will also be utilized to support **community-led service delivery for population left behind** through development of tools such as treatment literacy, reminders, alert; and response to loss to follow up. Healthcare Workers capacity will be built to serve people with disabilities through training in sign language in year 1 and further support for year 2 is requested in above allocation. **Intervention 2: Prevention and management of co-morbidities:** This funding request will support a scale up and improvement of quality of management of co-morbidities among people on ART focusing on Cryptococcal Meningitis, Cervical Cancer, Hepatitis B and C, TB and STIs. The prevalence of advanced HIV disease is high at 30% in Zambia[52] and mortality also remains high at 21000 per year[53]. Gaps exist in addressing these co-morbidities such as inadequate human resources, diagnostics, poor infrastructure and optimize medicines such as flucytosine for crytococcal meningitis treatment. In this regard, an implementation study to inform the integration of NCDs in routine HIV care for PLHIV is also proposed.. Funds are requested to support the establishment of 10 centres of excellence to cover all provinces (complementing existing 3 centres). These are centres for the management of complicated HIV cases as well as continuation of medical education, mentorship and in-service training. Funds will also be utilized to provide technical support, training and mentorship to HCWs on the management of co-morbidities; and setting up of HIV case based surveillance in 45 districts in the Northern Region (Southern region is supported by other partners). Support will also be provided to scale up of standardized approaches for treatment substance abuse disorders and mental health disorders among PLHIV through operationalised a non-pharmacological treatment protocol in one province(Copperbelt) to complement PEPFAR funding for Lusaka province. **Intervention 3: Scale up of management of cervical cancer among PLHIV** - Due to high risk of cervical cancer among women LHIV, funds are requested to support to improve cervical cancer treatment through training doctors in Loop Electrosurgical Excision

[51] Zambia Population Based HIV Impact Assessment, 2016
[52] Zambia Population Based HIV Impact Assessment, 2016
[53] Spectrum HIV estimates 2019

	Procedure (LEEP), development of treatment protocols and decentralizing LEEP treatment centres. Training will be offered to HCWs in cancer screening and establishing cervical cancer screening in high volume sites to complement 90 screening sites set up with PEPFAR and CHAI support. Support will be provided for screening of women using village based mobile screening; increasing awareness on cervical cancer through orientation of chiefs, traditional healers and religious leaders and engaging CSOs providing services to WLHIV. Further, funds will be utilized to strengthen the cervical cancer programme through supporting the development of a cervical cancer strategy, development of national cervical cancer screening guidelines, conducting data audits and roll out of SmartCerv national database **Intervention 4: Treatment Monitoring – Viral Load.** To support the scale up of VL monitoring in the country, funds are requested to procure VL testing reagents. **Intervention 5: Treatment Monitoring – Drug Resistance.** Funds are requested to support procurement of reagents for routine DRS testing (PSM) to optimize ART in those failing DTG regimen; establishment of a national data base; support for EQA (Supra-national testing); capacity Building of clinical and lab staff to create a national pool of experts. A national DRS survey will be undertaken in 2022 (a follow up to 2019 survey) to provide updated data on HIV-DR. Support will also be provided to establish a community-led monitoring and response to early warning indicators (EWI) of HIVDR to improve client reporting.
Priority Population(s)	ART: All people living with HIV DSD: Adolescents and young people, men and key populations Management of co-morbidities: all people living with HIV Cervical cancer: Women Living with HIV
Barriers and Inequities	• Access to viral load monitoring & EID: Despite the rapid scale up, challenges in access in far flung rural areas leads to long turn-around time as samples have to be transported. This too affects paediatric ART initiation. • Quality of care (Health Care worker competencies): With introduction of new molecules, patient care must be optimal to avoid harm. The rural areas of Zambia have low numbers of skilled physicians compared to urban areas. The solution lies in scaling up routine ECHO training and case discussions with all ART providing facilities. Active-Pharmaco-vigilance through EMR is required. • Adolescent and Young Persons in Schools and Colleges: Due to stigma and discrimination and boarding school movements, these potentially default treatment. There is need to strengthen DSD models that speak to their needs.
Rationale	Investment in the procurement of DTG based regimens will improve the quality of ART services and increase retention. Analysis based on programme data shows that DTG based regimens significantly reduce Loss to Follow Up (Refer to lesson learnt). Investment in procurement of these drugs will have dual outcomes –sustaining PLHIV on ART and increasing retention. Further support for scale up of DSD models will also improve retention/reduce LTFU, improve efficiencies and sustainability in provision of ART programme. Use of community health posts and adoption of multi-month dispensing of ARVs reduces LFTU (also refer to lesson learnt on health posts)

	 Investment in the management of co-morbidities will be critical given their high prevalence among PLHIV. For instance, Zambia has the 10th highest incidence of Cryptococcal Meningitis (5000 cases per year). With regard to cervical cancer, Zambia is among the countries with the highest incidence rate of 40 to 80 per 100,000 people. Investment in co-morbidities management is aimed at improving the quality of life of PLHIV and reduce mortality.
Expected Outcome	Percentage of PLHIV on ART increased to from 91% in 2019 to 95% by 2023 Percentage of PLHIV on ART who are virologically suppressed increased from 73% in 2019 to 95% by 2023
Expected Investment	Within Allocation: US$ 106,388,949 Above allocation: US$ 19,041,157

COMPONENT: TUBERCULOSIS

Module 1	**TB Care and Prevention**
Intervention(s) & Key Activities	**Intervention 1: TB case detection** Activities prioritized in this module are in support of Zambia's plan to eliminate TB by 2030, Sustainable Development Goals (SGDs) and Global End TB Strategy. The approach is to sustain, increase the frequency and scope of intensified TB case finding (ICF) coupled with active case finding (ACF) at community level. The focus of ICF and ACF will be in the 60 high TB burden districts. These 60 districts are those with high TB and HIV prevalence, districts with big mines, prisons, and border districts. Key and vulnerable populations that include children, PLHIV, miners and ex-miners, prisoners and health care workers will be prioritized in all the ACF and ICF activities. To find and treat these missing people with TB, funding is requested to: **1. Sustain and Expand TB diagnostics** GeneXpert utilization: Funds are requested to sustain the utilization of GeneXpert machines by supporting the procurement of 707,459 cartridges and other operational costs. Zambia will fully transition to ultra-cartridges by 2023. **Urine LAM:** To increase TB case detection among PLHIVs, 501,000 urine LAM strips for all second and third level hospitals will be procured. Urine LAM will be implemented in line with the updated WHO policy that target health facilities providing ART services plus both in and outpatient PLHIV Urine LAM will be prioritized in the second and third hospitals where most of the patients who will need these tests are treated both in the wards and OPD. **2. Intensified Case Finding coupled with active case finding** In the last three years, investments from the Global Fund and USG and the World Bank supported ICF and ACF activities in high TB burden districts. In 2018 these activities

	contributed 27% of the total notifications. ICF and ACF will continue with a focus on the 60 high burden countries and high volume health facilities and urban and peri-urban TB hotpots townships. A sandwich approach modelled around mobile vans will be applied. (1) the ACF teams will camp in a community (the TB hotspots) and conduct TB screening using GeneXpert and digital x-ray. (2) Contact tracing for the bacteriologically confirmed TB patients will be conducted. (3) TB screening during traditional ceremonies and national events that gathers large crowd such as national health week. To create demand, community sensitization will be conducted by CSOs, CHWs and district and health /facility staff; and screening for both TB and HIV will done on site and those testing positive will be initiated on treatment promptly. At health facility level, TB screening at entry points for patients accessing care in all units and departments in health facilities will be reinforced. While all service points will introduce TB screening, the focus will be at the OPD and waiting room, admission wards, ART clinics and Reproductive and Maternal Child and New-born Health (RMNCH) units. At the OPD, a community health care worker will be deployed to support health facility staff in implementing triage, complete the presumptive registers and educate patients on producing quality sputum samples. To ensure all patients diagnosed with TB are notified in every health facility, a linkage coordinator will be administratively identified to take up this task. A mixture of x-ray, GeneXpert and TB Urine LAM diagnostic tools will be used to enhance TB case finding based on international normative guidance. The investment will support capacity building in case finding at facility level and will enhance recording and reporting. **3. Contact tracing and investigation** Within the framework of ICF and ACF contact tracing and investigation will be enhanced. All household contacts of bacteriologically confirmed TB patients will be screened for TB within 5 days of making a diagnosis of an index TB case. Household contacts will be screened using symptom screening and by Chest X-ray. In this request contact tracing will be prioritized in the 60 high TB burden districts. Contact tracing will continue to be conducted countrywide with support from other partners and domestic resources. Community volunteers will be involved in inviting contacts to health facilities, where applicable, after conducting initial symptoms screening in the community. **4. Strengthen recording and reporting and data management** Low TB notifications is in part due to TB cases not notified. This request will build capacity of TB coordinators in recording and reporting; data management through technical support and on-site mentorship and the roll out of the electronic case-based system, a TB module in Smartcare. A comprehensive response plan that seeks to address the causality of the under notification has been developed and is already being implement. To support this plan, funds are requested to build capacity of district TB coordinators and health facility focal persons; conduct data validation at facility, district and province levels; and enable district TB coordinators to conduct support supervision to both government and private healthcare facilities. 5. **Establish addition TB notification centers** TB cases are not notified because there are few notification sites compared to number of health facilities where TB patients take their anti-TB treatment. TB notification centers are limited to only 537 health facilities compared to over 2000 TB treatment clinics and the 2250 ART clinics. As part of TB-HIV collaborative activities, all ART clinics will also be TB notification centers and all TB treatment centers will be upgraded to notification centers by 2023. Funds are requested to support opening of additional 100 new notification centers. Some of the new notification centers will be in private health facilities. This request will support procurement of computers for an electronic case-based system, training and mentorship of staff and technical support supervision. **6. Expand the DataToCare platform**

	In the past three years, a USAID Funded project supported a roll out of GeneXpert connectivity systems using DataToCare that transmits laboratory results in real time leading to prompt treatment and reduction in loss to follow up. 160 GeneXpert sites are connected to DataToCare. This request will support the expansion of this connectivity systems to the remaining sites. This request will also support the laboratory information system to improve linkage to care and reduction in primary loss to follow up. **Intervention 2: TB Prevention** In this request Global Fund investment will support initiating 530106 patients on TPT including all contacts of bacteriologically confirmed TB patients. TPT in children including the contacts of the bacteriologically confirmed TB patients will be enhanced. Symptoms screening to rule active TB will continue to identify patients eligible for TPT. Where available, TST or IGRA will be used as screening tools particularly in contacts of TB patients and drug resistant TB. The scale up plan for 3HP is as follows: 25% in Year 1, 50% in Year 2 and 75% in Year 3 of the patients will be on 3HP but the availability and cost of the drugs are the limiting factors. **Intervention 3: TB Treatment** **Availability of TB drugs**: The gains Zambia has made over the past years in increasing TB treatment success rate are attributed to the uninterrupted availability of anti-TB drugs largely through the Global Fund Investments. Continuous and sustained availability of high-quality TB drugs including child friendly dispensable medicines is essential. The request will support procurement of first and second drugs for the period 2021 to 2023. **1. Community TB care delivery** Civil Society Organizations (CSOs) and Community Based Organizations have played an important role in delivery of TB services at community levels. Through the CSO umbrella organization, 559 community-based volunteers will be supported with enablers for them to support in ACF. Additional Community volunteers will out carry out advocacy and communication (community sensitizations) activities, training, mentorship (capacity building) and supervision of community health workers, and support other community based activities such as contact tracing, sputum collection and transportation, patient support including DOT and TB prevention The request will strengthen collecting, tracking, monitoring, and reporting of community contributions to TB notifications. Community players will play a critical role in raising awareness about TB as an integral component of addressing TB stigma. Under this intervention, funds are requested in above allocation to support the TB awareness campaigns through electronic media and IEC materials. **Intervention 4: Engage All Care Providers** **2. Private sector involvement in TB** In the past three years through investments from the Global Fund and the World Bank, progress has been registered in involving the private facilities in TB prevention, diagnosis, and care. Lusaka and the Copperbelt provinces have the highest number of large private clinics and hospitals. Southern and Central provinces equally have a substantial number of private health facilities. The other private health facilities are in the mining areas of North Western Province. This request will support the expansion of involving private health facilities in Lusaka, Copperbelt, Southern, Central and North-Western provinces in TB care while the World Bank project will continue support other mine hospitals. In this request the contributions of private health facilities to TB notifications will be actively monitored and tracked. Support for private sector involvement in TB care will be supported through domestic resources. **Intervention 5: TB case detection and treatment among key Populations** **1. Increased childhood TB case detection**

One the factors contributing to the low TB notifications in children is the difficulties to obtain sputum specimens from children. Xpert testing using stool specimens has been evaluated in children. According to the World Health Organization's Rapid Communication on Molecular assays as initial test for the diagnosis of TB and rifampicin resistant of January 2020, stool had sensitivity of 61% compared to 65% for sputum. Specificity for all specimens was high that varied from 98% to 100%. Given these promising results, Zambia will introduce Xpert testing using stool specimens in children to address the gap of low TB notifications in this population. This request will support supplies and costs associated with introduction of Xpert testing using of stool specimen in the first group of hospitals (all provincial hospitals) and roll out to additional facilities. By the end of the first year of the grant, Xpert testing using stool specimens will be rolled to more health facilities, aiming at reaching every GeneXpert site by 2023.

TB screening for children will also be linked to all child specific services which include immunization, RMNCAH, nutrition using symptoms screening as an entry point

2. Other key populations

Funds to support TB activities for key populations are requested in above allocation except activities for inmates. These include prisoners, PLHIV, miners, ex-miners, and HCWs. Each target district will prioritize TB screening of key populations at regular intervals. Zambia is tracking the 90-90-90 strategy, however, the 90 on reaching all vulnerable groups are lagging because data are only available for children and PLHIV. This request will support tracking all the other vulnerable groups mentioned above. All ICF and ACF activities will prioritize key populations. Activities addressing TB among miners are funded through a World Bank supported Southern Africa TB Health Systems Support Project.

In prisons, TB screening will be enhanced by screening at entry, exit and routine screening. There will also be annual mass screening campaigns conducted to mop up cases that may be missed at entry, exit and through routine surveillance.

3. TB among Traders and Marketeers

These are mobile groups at high risk for HIV, likely to miss ART appointments and working in crowded environments. High volume markets and trading areas will be identified on the Copperbelt, Lusaka, Southern, Central, Luapula, and Western provinces and TB screening conducted monthly in collaboration with the local authorities, civil society organizations and community-based organizations. These groups will be reached within the framework of active case finding activities.

Intervention 6: Strengthening TB services coordination and integration – funds are requested to**:**

- Integrating TB screening in service points of the health system which includes MCH, OPD, in patient and ART clinics in the 60 districts. This approach will be strengthened by applying IMAI (Integrated Management of Adult Illness) at all service points. ICF will include screening for TB in population with NCDs such as diabetes and lifestyle habits such as smoking and misuse of alcohols in all service points. This is part of the ICF that will be conducted health facilities
- Roll out quality improvements (QI) of TB services. ICF/ACF and quality of sputum samples are some of the areas where quality improvements will be applied. Support to provide for onsite training for staff in health facilities (TB clinic, OPD, wards, laboratory, and pharmacy) and printing of jobs are requested. In all technical support supervision to health facilities will incorporate QI.
- Revise and update the national strategic plan and guidelines for DS TB and DR TB in line with the End TB strategy and the latest WHO guidelines, respectively.

Addressing Human Rights and Gender issues:

The ratio of men to women who suffer TB in Zambia is 3 to 2. TB Mortality is equally higher in men than women. The difference is largely due to exposure to risk factors for TB such as smoking and alcohol misuse that are higher in men than women. To address these

	disparities, the programme will reach out to the men in the workplaces, and develop IEC materials to target this population and share with them at community level. The programme will also take a family approach to involve the heads of households especially in contact tracing and TPT in children to mitigate resistance from the men. Additional activities to address human rights and gender issues will include: • Conducting TB awareness to dispel myths about TB • Implementing school programmes as part of raising TB awareness in the school age group (this will also adderess TB stigma considering that the gap of estimated TB and notifications among child and adolescents is wide) • Conducting cohort analysis to include gender and age
Priority Population(s)	Adults, adolescents, and children are priority populations. The other priority population are key populations that include PLHIV, prisoners, miners, ex-miners, Health Care Workers, traders, and marketeers
Barriers and Inequities	• Health facilities and diagnostic services are concentrated in big cities and urban areas. This means that in rural and hard to reach areas such as in Western province, the TB patients cover long distances to travel to health services, usually with no transport available, limiting access to care. • Centers where TB patients can be notified are only 537 while treatment centers and ART clinics are above 2000. With this gap some TB patients are not notified posing a threat to effective TB-HIV collaborative activities. • Inequities to access to information, prevention, care, and financial and social protection are likely to affect the poor disproportionately, as well as other populations facing social exclusion, thus potentially exacerbating existing inequities and TB stigma. • Partner involvement is restricted to some areas/provinces further limiting availability and access to TB prevention, diagnosis and care in the underserved districts and provinces. • Stigma and discrimination are still a problem at individual and society levels. Patients hide the disease from families and friends and present late for treatment which may lead to continued TB transmission in the community. Continued and intensified health education and sensitization by CSO/CBOs involving community, traditional and church leaders is important. The Covid-19 pandemic may make TB stigma even worse and therefore need to monitor how COVID-19 has impacted on TB services.
Rationale	• Zambia plans to eliminate TB by 2030. This demands a rapid reduction of TB incidence from the current 346/100,000 population to 20/100,000 population in 2030. TB incidence in Zambia is falling by 4% annually, if we continue with annual rate of reduction, Zambia can only end TB by 2088. To reach TB elimination, annual rate of reduction of TB incidence should be falling by at least 27% each year, justifying the need to rapidly increase treatment coverage (currently at 58%) through enhanced ICF/ACF and that all contacts of bacteriologically screened for TB and those testing negative for TB are put on TPT. • As high as 25,000 TB case are not detected or not notified justifying the need to intensify ACF and ICF and build capacity of TB coordinators in recording and report and data management • Access to GeneXpert is still limited to urban and peri-urban areas justifying the need to procure additional machines while sustaining the existing ones • The proportion of Children with TB out of the total notifications is low (6%) against the expected level of 10%, justifying the need to invest in building skills of health care workers and bring in new tools to help in TB screening and diagnosis in children • Radiology coverage in Zambia is low and from our local experience investing in digital x-rays brings efficiencies in the use of GeneXpert machines, hence justifying the investments in digital x-rays
Expected Outcome	• TB notifications for new and relapses TB cases increased from **36,150 in** 2019 to **48,994** in 2023. • Increase the proportion of children with TB (out of the total notification) from 6% in 2018 to 10% in 2023.

	• Treatment success rate increased from 90% in 2018 to **95%**in 2023
Expected Investment	Within allocation: US$ 14,536,784 Above allocation: US$ 25,558,278

Module 2	**MDR-TB**
Intervention(s) & Key Activities	**Intervention 1: DR-TB case detection** **1. TB case detection and diagnosis** The gap between estimated MDR-RR-TB cases and the notified DR-TB cases remains wide. The WHO estimated that there were 3100 TB patients in 2018 but only 627 were detected and 507 were notified in 2019. To reinforce the TB diagnostic network to increase detection of drug resistant-TB, funding is requested to procure TB diagnostics tools such as LPA machines. Funds are also requested to procure laboratory regents for culture and molecular laboratories. The anticipated investments will support an increase in DR-TB detection by improving access to rapid molecular diagnostic tools such as GeneXpert and LPA. Access to line probe assay will be increased by 2 from the available 6 (3 currently under procurement). The new LPAs will be placed in Eastern and Southern provinces and laboratories in these two provinces will be renovated to levels that can support LPA services. Southern and Eastern provinces have challenges in transporting samples to culture laboratories resulting in delays in starting treatment and irregular monitoring of DR-TB patients on treatment. LPAs will enhance the confirmation and diagnosis of MDR-TB and Pre-XDR/XDR TB, respectively. Second line phenotypic DST will be performed in the 3 culture laboratories. DST for newer and repurposed drugs will also be established. An important area that this request will support is transportation of laboratory specimens from all districts to the 3 culture facilities for the baseline and follow-up monthly cultures and drug susceptibility testing for all confirmed rifampicin resistant TB patients. Transportation of specimen samples for all relapse and other retreatment patients to the culture facilities for drug susceptibility testing will be supported, leveraging on the current courier systems and human resource to create efficiency. The specimen transportation support will include the intra-district courier of samples to GeneXpert hubs, where there is limited support to reach the last mile. Integrating HIV and TB specimens will be enhanced. This support will be provided under RSSH laboratory systems. **2. Prevention** From routine programme data 40% of DR-TB cases are primary, indicating that there is ongoing transmission of DR-TB in the community justifying the need for efficient TB infection and control measures: Support to procure PPEs are included in the request. **Contact tracing and investigation**: TB screening among all household and close contacts will not be based on symptom screening alone. In a recent contact tracing campaign among contacts of DR-TB patients where a combined symptom screening and chest x-ray was applied, the yield was better than when only symptoms screening was used. In this request contacts will be invited to come to the health facility for a comprehensive screening that includes performing a Chest-X-ray. The request will support enablers for contacts and stipend for community health care workers who will help to screen, trace and invite these contacts to health facilities. **DR-TB Preventive Therapy (**TPT) for contacts of DR-TB patients is not yet offered despite evidence that 40% of DR-TB cases are primary. In this request support is requested for the procurement of TPT commodities, INH, 3HP, Levofloxacin and Delamanid. The latter two drugs will be used in contacts of DR-TB patients. Levofloxacin and Delaminid for TPT will be supported through domestic resources. **Intervention 2: Treatment**

	Zambia has fully migrated to all oral MDR/RR-TB regimen. This has contributed to improved treatment success rate for DR-TB. Supply of high-quality DR-TB drugs and ancillary drugs is requested over the 3-year period. Both longer and shorter regimens will be provided in line with normative guidance. DR-TB patients who have not taken anti-TB drugs for more than a month and those in whom fluoroquinolones resistant is excluded will be on shorter regimen. To enhance monitoring of MDR-RR-TB on treatment this request will support procurement of ECG, haemacues for 125 MDR treatment sites (old and new) for monitoring patients on Bedaquiline and Linezolid. Currently only 6 provincial hospitals and UTH have portable ECG machines. Support for procurement of ECG machines is requested in above allocation. Additionally, the request will support: • Conduct mentorship to MDR-TB treatment centres in aDSM including ensuring active reporting of adverse events • Three TB experts sits in the Medicines Regularly Authority technical committee to perform Causality Assessment (CA) **Expansion of DR-TB initiation sites:** DR-TB treatment sites will be further decentralized from 32 to 100 district hospitals by end of 2023. This will improve access and reduce on loss to follow up as well reduce the catastrophic costs TB patients face in assessing DR-TB services. Correspondingly low DR-TB notifications will be addressed through raising index of suspicion of DR-TB, bringing sputum collection techniques (gastric lavage and sputum induction). Districts with high MDR/RR-TB notifications will be prioritized. Training of health care workers is requested.
Priority Population(s)	Adults, adolescents and children and all key populations, contact of DR-TB patients
Barriers and Inequities	• Limited access to facilities providing DST services are hampering progress to achieve universal access to DST. • Inadequate laboratories with distribution skewed to urban centers. Some of the new Xpert machines will be deployed to those without especially rural districts. • Specimen transportation does reach the last mile • Some of MDR/RR-TB patients may not receive adherence support due to high attrition of community health care workers
Rationale	• The gap between the estimated incidence of MDR/RR-TB and those detected and treated remains wide. The World Health Organization WHO estimates MDR-TB/RR at 3,100 but the laboratory confirmed cases were 546 in 2018. Strongly justifying investment in increasing access to drug susceptibility testing (DST) using Xpert and LPA • TB treatment success rate is steady increasing. To further increase treatment success rate from the current levels justifies migration to the all oral shorter MDR/RR-TB regimen • Combining symptom screening and CXR in excluding TB among close contacts of DR-TB patients yield better results, justifying investments to invite contacts to health facilities to access CXR services • Nutritional support to DR-TB patients has resulted in favorable outcomes, justifying the need to continue this activity
Expected Outcome	MDR/RR-TB Treatment initiation sites increased from 32 in 2019 to 100 in 2023 Increase DR-TB notifications from 507 in 2019 to 2,200 in by 2023 Increase TB treatment success rate from 76% (2017) cohort) to 82% in 2023
Expected Investment	Within allocation: US$ 5,981,149 Above allocation: US$ 155,891

Module 3	**TB/HIV**
Intervention(s) & Key Activities	**Intervention 1: Enhance TB-HIV collaborative activities** In Zambia HIV and TB prevalence rate are high. This justifies the need for an increased coordination and collaboration of TB-HIV activities between the two programs**.** To sustain

	gains made in the screening of PLHIV for TB, funds are requested to purchase 533,000 GeneXpert catridges and lab reagents to enhance case funding for both DR-TB and DS-TB among PLHIV. 500 healthcare workers will also be trained to improve ART and TB management in co-infected TB patients in both TB and HIV sites. This will minimize catastrophic costs as patients will be served for TB and HIV in one clinical visit. Technical support and mentorship visits will also be undertaken to strengthen TB/HIV management. **Intervention 2: Prevention** **Expand TPT coverage:** This request will support procurement of TPT commodities (INH, 3HP, 6H, 3RH, Levofloxacin and Delamanid. For PLHIV and contacts of drug sensitive TB 3HP and 3RH will be optimized, respectively. In Zambia PLHIV in need of TPT is about 780,000 out of 1.2 million persons living with HIV. In this request Global Fund investment will support initiating 400,000 patients on TPT including contacts of bacteriologically confirmed TB patients. Support is requested to mentor health care workers in TPT, Latent TB infection screening using TST/QuantiFERON-Gold and monitoring and evaluation of these interventions. (discussed in the TB care and prevention model).
Priority Population(s)	PLHIV, TB patients and other key populations (adults, adolescent and children)
Barriers and Inequities	• Stigma and discrimination, some patients still want to hide their conditions which may lead to late presentation at health facilities, poor adherence, and loss to follow up • Co-infected TB-HIV patients getting TB and ART treatment from different clinics leads to patients spending long in health facilities, resulting in patients facing catastrophic cost
Rationale	• Zambia plan to eliminate TB by 2030. Increasing TB case detection alone is not enough to further reduce TB incidence, justifying the need to increase TPT coverage to prevent the developing of active TB from latent TB infection • Mortality due to TB is high. Out of the 18,000 people who die to a cause attributed to TB 72% are in people living with HIV, strongly justifying the need to have all TB patients tested for HIV and those that all those who tested HIV positive they are put on ART
Expected Outcome	Increase the proportion TB patients with documented HIV status from 98% in 2019 to 100% by 2023 Percentage of HIV-positive new and relapse TB patients on ART during TB treatment increased from 97% to 100% in 2023 Proportion of PLHIV newly enrolled in care who are initiated on TPT increase from 49% in 2018 to 80 in 2023
Expected Investment	Within allocation: US$ 6,367,802 Above allocation: US$ 1,500,000

COMPONENT: RESILIENT AND SUSTAINABLE SYSTEMS FOR HEALTH

Module 1	**Health Products Management Systems**
Intervention(s) & Key Activities	**Intervention 1: Capacity building for Zambia Medicines and Medical Agency (ZAMMSA) -** The Government of Zambia has passed legislation to convert Medical Stores Limited (MSL) into ZAMMSA, bring PSCM functions under this single institutional structure to streamline accountability and management of the PSCM system. This will result in better oversight leading to higher levels of availability and access to diagnostic and treatment services across all disease areas. Funding is requested to support change management technical assistance to facilitate the establishment of procurement capacity in the new ZAMMSA. Capacity building will include hands on training and mentorship of staff in international public procurement practices; development of procurement procedures manual and other related documents as these do not exist in the current Medical Stores Limited. This funding will complement USAID support under COP20 and Government support to ZAMMSA.

	Intervention 2: Improving last mile delivery of Health Products by optimization of storage infrastructure capacity at provincial hubs and health facility levels and supporting operations of MSL- Optimal location of provincial hubs in relation to health facilities is key for the success of the hub strategy (refer to PSCM lessons). This will contribute to ensure a responsive supply system that addresses product availability in health facilities in a timely manner. Furthermore, operational support will sustain availability of malaria, HIV and other health products in health facilities. Under current implementation arrangements, Global Fund resources are used to support the operations of three hubs (Kabompo, Choma and Chipata) while USAID has supported procurement of distribution motor vehicles as well as third-party distribution contracts. The supported hubs have routinely scored higher on achievement of distribution schedules than non-supported hubs. Funding is requested for construction of 2 new provincial hubs to optimize storage capacity to improve last mile delivery and to improve storage capacity challenges at health facility level. While USAID will continue to provide support for 3PL delivery from the center to the hubs, support is required to sustain the last mile distribution operations from the hubs to health facilities. **Intervention 3: Roll out of electronic warehouse management system (WMS) to hubs -** A WMS is being rolled out by MSL in order to convert the Hubs from cross-docking to stock-holding and order processing centers. MSL is implementing a new WMS with USAID support. This funding request will support continued roll out of the WMS to all hubs as well as transition the MSL stock management system from the center to the hubs. The WMS will incorporate the fleet management and distribution trip scheduling function. Hub order processing will contribute to a just-in-time health product delivery, minimize stock outs and stock wastage. **Intervention 4: Strengthening MOH pharmaceutical management and Coordination (Control Tower)** – An appropriately constituted team is required for supervision of supply chain functions, partners and stakeholders, based on clearly defined and agreed performance framework. This team will manage multiple partner contributions to health products procurement and in-kind donations and ensure effective coordination of partner contributions. The team will also provide oversight over the whole supply chain from MSL through the hubs and health facilities. Under the current GF grant and USAID support, progress has been made in setting up the team to take up this role. However, further support is required to build capacity and institutionalize this unit within MOH. GF funds will be invested in further development of the pharmaceutical management capacity through widening terms of reference of the supervisory team to focus on comprehensive system of supply chain performance management. GF funds will be utilized to develop a performance framework and provision of long-term change management TA to provide hands-on support until the system is operated by MOH.
Priority Population(s)	Vulnerable and key populations seeking health services in primary healthcare facilities and community level health service delivery points (last mile distribution beneficiaries)
Barriers and Inequities	Under-stocking of medicines and medical suppliers hinders access to quality health services especially for marginalized populations in hard to reach rural areas. For instance, the availability of essential medicines at health facilities is about 74% (ranging from 31% to 100%)[54] with the wide range explained by an inadequate performing of the PSCM system. The eLMIS system shows that in 2018, 88% of orders could be fully supplied as to Medical Stores did not have the right products in the right quantities at the time of order processing. This non-optimum availability of essential medicines was also said to be a key contributor to late delivery of orders to the Hubs and to hospitals and clinics. These PSCM bottlenecks creates barriers for provision of quality healthcare services, especially at primary level where most vulnerable populations seek services.
Rationale	(1) The establishment of ZAMMSA will streamline management, coordination and accountability of the PSCM functions which are currently spread across several MOH directorates, ZAMRA and CHAZ with no single authority with responsibility for all PSCM

[54] MSH, 2019. Zambia National Rational Use of Medicines Study Final Report.pdf

	functions. ZAMMSA responsibilities include procurement, storage and distribution of medicines and medical suppliers. Technical assistance sought under this grant will facilitate the establishment of core procurement capacity and effectively manage change in transitioning current procurement arrangements to ZAMMSA. (1) Improvement of storage capacity at provincial hubs and health facilities is key to providing capacity to make available medicines and health products for all Universal Health Care, including EPI and laboratory needs. Past investment have improved hub infrastructure in six provinces. Location of distribution hubs from target health facilities is a factor in reducing delivery time and interaction with service delivery points and involvement in maintaining required stock levels in health facilities. The planned establishment of additional 2 hubs. This will optimize the last mile distribution in provinces with infrastructure inadequacies as provided for in the Health Sector Supply Chain Strategy (HSSCS). Note that storage capacity at health facility level is inadequate to hold the volumes particularly in the multi-month dispensing strategy. This increases the need for hubs to be constructed where there are none in order to reduce distance from health facilities. On future applications, funds will be required to improve storage capacity at facility level. (2) Lack of capacity in the hubs for order processing and distribution to health facilities has hindered their effectiveness in achieving the objective of an efficient last mile distribution of medicines and medical supplies. The roll out of the WMS will enable hubs to fill this capacity gap in hubs in order for them to process orders and reduce delivery time to health facilities. This will increase essential drugs availability in health facilities and improve stock (inventory) management. (3) Operational support for MSL is critical to ensure performance of last mile distribution of health products. Inadequate funding results in fulfillment of only 2 out of 6 delivery activities. This means that “non-essential” items such as condoms are not prioritized when deliveries are made. The support will enable MSL to improve on delivery schedule compliance overall as well as to deliver specific products such as condoms. Support of MSL hub operations on this application will enable Government to focus on converting MSL to ZAMMSA. This agency will also be allowed time to set-up and build income generation capacity as mandated in the law. Lack of hub operational support will put the supply system at risk and potentially precipitate failure to deliver medicines and other health products for preventive and treatment programs across all diseases. (4) Decision making for supply planning, as well as performance management of the health sector supply chain remain a challenge due to non-utilization of data as well as under-development of the performance management and coordination functions of MOH. This leads, among other things, to poor coordination among partners, poor oversight of MSL and Health facilities and inappropriate supply and use of medicines. The MOH management oversight system or control tower lacks clear performance management structure (M&E), resulting in lack of clarity on responsibility and accountability for supply chain interruptions, such as delays in procurement, non-compliance to delivery schedules and wastage of supplies. The establishment of a control tower composed of a qualified team is required to improve supervision of supply chain functions, partners and stakeholders. Global Inv0estment in the development of this control tower will contribute to building a sustainable system for performance improvement and management of medicines and health products selection, forecasting and quantification, financing and procurement, quality assurance and supply chain operations which are key for ensuring medicines and medical supplies are available at health facilities at the right time in right quantities and quality.
Expected Outcome	98% of health facilities have tracer medicines for the three diseases available on the day of visit or day of reporting
Expected Investment	Within allocation: US$ 11,834,796

Module 2	Laboratory Systems
Intervention(s) & Key Activities	This funding request will address the gaps identified in all areas included in this request. While there are partners supporting laboratory systems strengthening in all 10 provinces of Zambia, gaps still remain. For example, PEPFAR, has committed funds towards sample referral systems, USD 542,000 towards procurement of ancillary equipment such as centrifuges, refrigerators and other pieces of equipment. the gaps identified for an integrated system is what has been included in this funding requests. Zambia is also a beneficiary of the Fleming fund that is supporting strengthening of bacteriology activities throughout the country. Activities such as training, procurement of equipment (blood culture systems and others) will be undertaken under this funding. The TB World Bank Project is supporting laboratory TB activities in the mines including quality management systems (Strengthening Lab Mangment Towards Accreditation (SLMTA) trainings). This funding request is recognisant of all these activities and as such activities included in this request are gaps and were done in consultation with major laboratory partners. The public sector has a total of 400 laboratories, with support from PEPFAR funding 15 of these have full EQA programs and through this funding, a request has been made to support an extra 30 laboratories with full EQA participation. The same is true for the accreditation program. This funding request will support level II and level I laboratories as PEPFAR support is going towards level III and some of the Level II laboratories all viral load and EID laboratories. The activities in this funding will target selected viral load hubs and high volume health centres for selected activities. **Intervention 1**: **Procurement of laboratory ancillary equipment** • This funding will also support procurement of laboratory equipment all of which will be out right purchases. This includes mainly ancillary equipment such as (e.g. distillers, pipettes, incubators, centrifuges etc). Laboratories will be able to use these pieces of equipment for all tests that require such type of equipment. The GRZ has provided infrastructure and trained personnel to use these pieces of equipment. Competencies on use of these pieces of equipment will be acquired when user training by suppliers is done onsite during installation and routine maintenance activities. • **Equipment Maintenance systems.** This funding will support the procurement of equipment maintenance systems for laboratory equipment and strengthen calibration services for equipment that requires calibration for continued service provision. Most (90 – 95%) of the laboratory equipment in the public sector is owned by the government of Zambia and has been standardized base on the level of care being provided. Zambia with support from CHAI is working on developing a list essential diagnostic list for both equipment and commodities. This funding request will support the procurement of bundled reagent that is inclusive of service and maintenance systems for analysers. In this grant, it is expected to recruit Biomedical technologists/engineers who will provide maintenance systems for ancillary equipment. Other than servicing ancillary equipment, with support from PEPFAR, three calibration centres have been identified and renovated. Equipment for these calibration sites has been procured. These calibration centres will be made operational by government supporting human resources to work in these centres and in this request, funding is being sought to continue to train staff on ISO 17025 and procure office equipment thus making the centres operational. • Through PEPFAR support, all viral load/EID laboratories have been installed with power back up systems that mainly support these laboratories and where the viral load labs are part of the main laboratories, all power dependant equipment has been catered. Further support has been planned for more laboratories (100) at hub level for power back up through PEPFAR support. Some of the initiatives towards power back up include switching power back up systems from batteries to solar some as of the batteries are failing over time. For this funding request the TB module has included purchase of solar power for GeneXpert sites. **Intervention 2**: **Quality Management Systems and Accreditation**

	• **Quality Assurance Coordinating Section**[55]: Establishing coordinating unit for lab quality management system: This funding will support the establishment of the laboratory quality assurance, section a body that will coordinate all quality management systems including EQA, Internal quality control and accreditation activities. This support will include making available physical space as well as furnishing the section and operationalize it. The section will also need a vehicle to provide transportation for day to day activities but also for visits that will be conducted to sites. This funding request will also support qualified QMS staff that will be responsible coordinating all QMS related activities in the country It is expected that the QA section will ensure effective scale of SLIPTA activities as it strive to become the SLIPTA center of excellence • **Accreditation Program**: A request is also being made for laboratory services to scale up accreditation program by scaling up laboratories that will be accredited. With support from PEPFAR funding five (5) laboratories in Zambia have achieved international accreditation with SADCAS. While the government continues to work with PEPFAR in accrediting laboratories, more have been planned through this funding. – PEPFAR Funding is supporting full accreditation of 7 laboratories; while this grant will support 6 labs. The target laboratories providing all test profiles including TB, Viral. Load EID, CD4, malaria and others. The plan is to accredit all tests being performed by these laboratories. To support this process, the ministry of health with support from PEPFAR has trained and certified QMS mentors and auditors that will work with these laboratories to enable them achieve accreditation. • **QMS Certification Program:** Other than international accreditation, a request is being made to support local certification of laboratories based on system that the country will adopt and customize from the SLMTA/SLIPTA programs. The initial phase will target hubs (20 facilities) that are currently processing referral samples from surrounding collection facilities. The certification program will need development of tools to be used, training materials, assessments visits to evaluate site and award certification on a star system. Zambia has both qualified QMS trainers and assessors that will be used to achieve this process. Various QMS related trainings will be conducted for selected sites with support both from this grant, PEPFAR and the Government of Zambia • **External Quality Assessment Services (EQA)and Corrective Action -** Funding is being requested to support procurement and distribution of external quality assessment schemes for various test profiles. This support will also go towards strengthening and provision of corrective action for all external quality assessment services. This funding is targeting to support 30 facilities from various levels of care. PEPFAR funding has been supporting EQA for CD4, viral load EID and other tests such as haematology, chemistry and others. . The QA section mentioned above will be responsible for these activities including the trainings that will be needed. For sustainability it is envisioned that the program will eventually be localized to produce local EQA materials which is cost effective. It is also expected that the local EQA program under the QA section of laboratory services unit, will work toward attainment of ISO 17043 through various trainings outline in this funding request. As part of the requirements for accreditation and certification is calibration of equipment and this funding will support operationalizing of 3 calibration centres located in Lusaka at the University Teaching Hospital, Ndola at the Ndola Teaching Hospital and Mansa at Mansa General Hospital. These 3 sites were renovated for this purpose with support from PEPFAR. Operationalizing will include procurement of equipment and supporting the centres acquire its own accreditation status. Training of staff to work at the centres will also need support • The MOH is in the process of developing guidelines for monitoring the quality of laboratory commodities upon receipt at ZAMMSA before distribution to laboratories. The MOH will work closely with ZAMRA to monitor the performance of commodities once distributed to health facilities. As part of post market surveillance, (PMS) this funding

[55] Ministry of Health – Concept Note: Establishment of the Medical Laboratory Quality Assurance Coordinating Unit 2020 **page 6**

request will support the evaluation of data from external quality assessment and internal quality control programs to inform the performance of the commodities once placed in the field. EQA and EQA visits have been planned under this funding requests that will also include evaluation of data for PMS.

Intervention 3: **Laboratory safety**

A request is being made to support strengthening the laboratory safety program within laboratories This will include development of national policy and procedures for the biosafety program in line with the national laboratory strategic plan. The GRZ will support the development of a fully costed laboratory safety plan with technical support from CDC Zambia. To enhance safety practices within laboratories, disposal systems within the labs will be improved by providing appropriate waste disposal bins for 134 laboratories including central, provincial and district hospital labs. As part of strengthening safety practices, laboratory personnel in these facilities will be trained in biosafety practices. Other safety provision required in laboratories such as first aid kits, chemical kits, eye wash stations will be provided to improve safety within the laboratories. Other disposal systems (appropriate incinerators) for hazardous materials (cyanide – coming from guanidine thiocyanate) generated in the laboratory and POC testing sites will also be supported through PEPFAR funding.

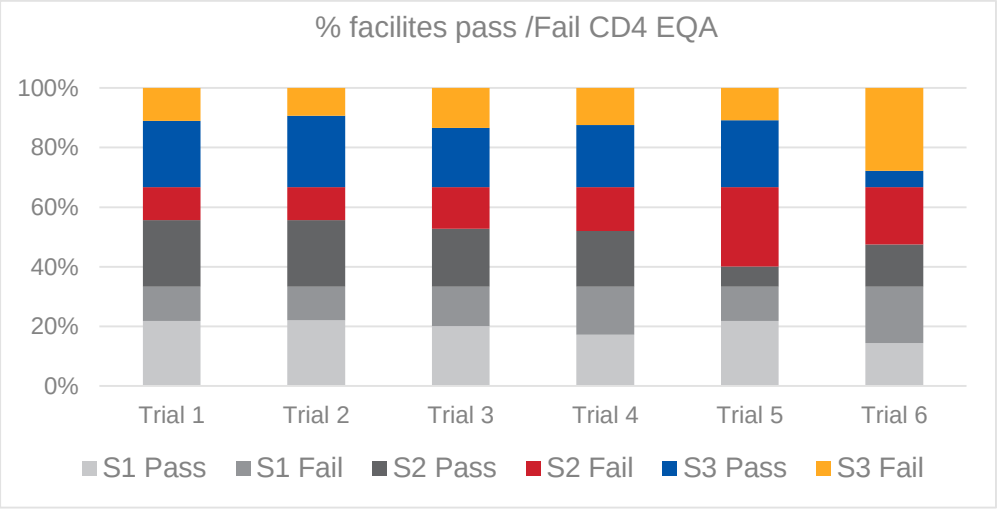
The routine certification of a biosafety cabinet (BSC) is vital to the safety of laboratory personnel, product, and the environment. These BSC are designed to prevent harmful exposure to biological and chemical agents. With support from Public Health England (PHE) and PEPFAR, Zambia has recently trained three (3) MOH personnel to certify Biosafety cabinets for the country. These individuals have received NSF/ANSI 49: Biosafety Cabinetry Certification and certification equipment has been procured by both PHE and CDC Zambia. Through funding from other partners such as PEPFAR, PHE, Fleming funds, will support operational costs for certification of biosafety cabinets, the procurement of filters and parts, and as well as the annual recalibration of the certification equipment with accredited institutions.

Intervention 4: **Information system and integrated specimen transport networks**

- **Sample Referral Systems**: A request is being made to strengthen sample referral systems through a coordinated sample and results feedback systems. Zambia has developed an integrated sample referral guideline that will inform the referral and result return network The support will include request for funding coordination meetings, procurement of motor vehicle, motor bikes, triple packaging systems, training of transporters and laboratory personnel and formulation of appropriate documentation for sample transport as well support towards running cost for the sample referral and result return systems which is a contribution to implement a comprehensive referral systems. Sample referral and result transport systems have been funded through both PEFAR and the Government of Zambia. Motors vehicle and bikes have been procured through different partners and this funding will support the gap that has been noted with these. All provinces except Northwestern where only 3 district have been supported have partner support in transporting samples and some have result transmission systems that have been installed such as eLABS, DISALINK and data to care. This funding is therefore being requested for Northwestern from year 1 and the rest for only year 3 for integrated sample referral system. Results return systems is being requested for sample collection facilities for an integrated result return system to improve result turnaround time. The country has resolved to gradually phase out data to care and implement DISALINK that is all inclusive for all tests profiles.

Laboratory Information Systems[56]: A request is being made for funding to support implementation of a laboratory information system (LIS). Both commercial and open source systems. This support will go towards development of national guidelines on LIS together with development of open source LIS for laboratories that cannot be considered for

[56] Association of Public Health Laboratories - Open Source LIS Concept Note, 2020

	commercial electronic LIS. Procurement of electronic LIS together with license fees and at the same time begin to develop and adapt open source electronic systems. This will require meetings and employment of developers and programmers to support this activity. Trainings for laboratory personnel will also be key to fully implement the LIS or electronic. With PEPFAR support 5 laboratories have full electronic LIS for all tests profiles. PEPFAR has supported LIS for viral load and EID only for PCR laboratories. This grant will support a total of 10 full laboratory information systems for all tests profiles This request will also support development of open source LIS for other labs for all tests profiles in year 2 of the grant to reduce on the required license fees. **Intervention 5**: **Monitoring and Evaluation (M&E)** This grant will support the review of the implementation of the laboratory strategic plan 2018 – 2022 and strengthen the system for data capturing on the key laboratory indictors. This will require meetings of all stakeholders as well as development and trainings in M&E tools. The funding will support monitoring and supportive onsite visits of all activities mentioned above. Associate of Public Health Laboratories (APHL) with funding from CDC and Clinton Health Access Initiate (CHAI) have begun the development of a dashboard for key indicators for the viral load and EID tests. This funding will support inclusion of quarterly monitoring site visit and other key laboratory indicators for program improvement and strengthening. .
Priority Population(s)	n/a
Barriers and Inequities	Inadequate quality of lab services, weak sample transportation and interrupted support of lab commodities create a barrier in access to effective diagnostics and eventual quality of care provided to PLHIV, TB and Malaria patients especially in rural areas and lower level health facilities.
Rationale	Interventions prioritized for strengthening of the lab systems will address the gaps identified in quality management and commodity supply in order to improve lab functioning in conducting all diagnostics. As shown by results of CDA4 quality programme based on 3 samples below, quality improvement is a major gap for labs. *Figure 24: % of facilities pass/fail CDA EQA* 
Expected Outcome	Percentage of laboratories achieving adequate performance in EQA for viral load testing increase by 70% by 2023
Expected Investment	Within allocation: US$ 4,804,774

Module 3	Human Resources for Health including Community Health Workers
Intervention(s) & Key Activities	**Intervention 1: Remuneration and deployment of healthcare workers** – Funds are requested to support the recruitment of 230 Biomedical Equipment Technologist after the first year to be placed in rural districts. 150 of these staff will be transitioned to government after year 2, and 70 in year 3. Funding for additional HRH required to support disease specific interventions is included in the respective modules while government will support additional HRH (nurses and CHAs) under co-financing. **Intervention 2: Strengthening community health implementation –** To enhance integrated service delivery at community level, funds are requested to harmonise operations of the various types of community based volunteers through establishing guidelines for the volunteers; standardizing training to enable them offer integrated health services; development of integrated screening tool and update CBV supervisory tools. Orientation of the CBVs will be carried out to enable them use the integrated service delivery guidelines. **Intervention 3: Community Health Information system** – Funds are requested to support quality and timely data collection and reporting from community level to ensure community data is available in HMIS. Funds will be utilized to standardize community indicators and providing reporting tools to CBVs through developing a community indicators handbook, integrating the indicators to DHIS2, updating community reporting tools to include new indicators, training CBVs and HCWs on data collection using the new tools and in data analysis, conducting data audits as well as conducting technical support supervision covering all districts.
Priority Population(s)	HIV, TB and Malaria vulnerable and key populations
Barriers and Inequities	With the shortfall of frontline staff in rural areas, healthcare workers in rural health facilities are overburdened with work load compared to their counterparts in urban areas. This funding request addresses this regional inequality in staffing and strengthening integrated service delivery.
Rationale	Investment in CBVs is justified to improve the delivery of integrated services and cost efficiency. Streamlining the regulatory framework, building capacity of CBVs and supporting them with tools, medicines and other commodities will enable them to bridge the gap between the community and facilities, improve access to healthcare through referral and enhance integrated service delivery.
Expected Outcome	% of health facilities submitting data on community based integrated services increase by 50% by 2023
Expected Investment	Within allocation: US$ 10,334,108

Module 4	Health Management Information Systems and M&E
Intervention(s) & Key Activities	**Intervention 1: Routine reporting –** Funds are requested to support: • Integration of standardized age and sex disaggregated data collection and reporting tools for all HIV/TB health programs with emphasis on adolescent health in DHIS. This integration will provide data needed to inform better prioritized HIV, SRH, MNCH and GBV programmes among others. Funds will also be utilized to support data reviews (including age and sex disaggregation) for adolescent health, TB and HIV programs in all districts. . • Capacity building for health information officers and healthcare workers in all districts and provincial M&E staff in all provinces on M&E. • Institutionalisation of hospital HMIS to strengthen the reporting systems at both community and hospital levels to inform programme planning, management and decision making at lower levels. This will also enhance data use and utilization at these

	levels and contribute towards the agenda of engaging the community in an effort to ensure "no one is left behind" and reducing inequalities among marginalized populations. • Digitisation of the HMIS forms and registers to reduce transmission of data to close to real-time. This intervention is expected to reduce data handling processes and procedures/ frequencies at district level (and thus reduce errors arising from data entry) and further improve data quality. The full architecture of processes has been developed. Funds from this grant will be used to close the gap in the support provided by other partners such as SIDA. In the long run, digitization will reduce the cost of printing of registers and other data collection tools. • DHIS 2 maintenance and upgrade to enhance data storage, data processing, cleaning and quality. Adequate data storage back-ups provide key historical data to inform exploratory studies and capacity of handling of more complex data. Further, DHIS2 data cleaning exercises are meant to align program data elements, indicators and populations to make it user friendly for uses. This will also bring on board new modules that may come with revised versions of DHIS. • Production of national annual statistics reports and bulletins - The production of annual national statistical reports is key as the reports provide a basis for revision of targets set in the M&E framework for programs, based on their performance. Further, the reports are used as an input in preparation for mid-term reviews, development of cluster reports and other reporting responsibilities outside the sector to inform policy making. **Intervention 2: Programme and data quality** – To ensure effective functioning of the HMIS and M&E system, funds are requested to support routine community monitoring and mentorship across 59 targeted districts; development and roll out of harmonized DQA protocols and manuals; national data quality audits and assessments as well as national data reviews. **Intervention 3: Surveys** – Funds are requested to support surveys and assessments identified in the various modules under HIV and TB. These surveys will generate evidence to inform programming and update key indicators. Surveys to be supported include Harmonized Health Facility Assessment, study on the impact of TPT on TB/HIV; size estimation of each key population in the country; Integrated Bio-Behavioral Survey; stigma index survey and support for AGYW specific research agenda.
Priority Population(s)	n/a
Barriers and Inequities	n/a
Rationale	Investment in the HIS and M&E interventions above will address gaps in data quality through capacity building, improve data visibility though systems interoperability as well as providing evidence to inform programming
Expected Outcome	70% facilities record and submit data using an electronic information system
Expected Investment	Within allocation: US$ 9,982,318 Above allocation: US$ 162,162

Module 5	**RSSH: Integrated Service Delivery and Quality Improvement**
Intervention(s) & Key Activities	Support under this module is requested to strengthen quality assurance and performance improvement through an integrated and holistic cross-programme approach. Funds are requested to programme quality assurance and improvement interventions below: **Intervention 1: Quality assurance and quality improvement** – Grant funds will be utilised to improve healthcare service quality and institutionalise quality assurance and quality improvement. Activities to be supported include: (i) Scaling up institutionalization of QI in HIV, Malaria and TB programmes – The government with support from partners has been mainstreaming and institutionalizing

	quality improvement across programmes and health facilities. So far, Service Quality Assessments tools have been developed and are being used to assess quality of services in HIV. This assessment will be expanded to TB and Malaria programmes. Funds are requested to undertake assessments, follow up mentorship and institutionalization of interventions for continuous quality improvement. (ii) Strengthen healthcare workers and communities' knowledge of QI in HIV, TB and Malaria through capacity building, mentorship, and self and peer appraisals as well as support supervision (iii) Development and adaptation of standards and guidelines to ensure consistency in quality of care and prevent errors or harm. (iv) Establish a platform for knowledge management and learning to continuously improve quality of service. Such platforms include National Health Assemblies and Quality Improvement conference. **Intervention 2: Strengthening performance improvement –**Funds are requested to support efficiency and effectiveness improvement of the malaria, TB and HIV programmes **Improving programme effectiveness:** Over the years, government and external partners including Global Fund and PEPFAR has invested heavily in HIV, TB and Malaria programmes as well as the health systems strengthening. However, the analysis of TB, HIV and Malaria data shows that some key indicators have not improved as expected. For instance, new HIV infections have not declined at expected rate; and key indicators such as knowledge of HIV, condom use, risk sexual bahaviour, teenage pregnancy, gender based violence among others have not improved in the last two decades. With regard to TB, case notification has been lower than expected TB incidence while TB mortality has flatlined over several years; and Malaria case fatalities have also stagnated. Funds are requested to conduct effectiveness evaluations to identify factors accounting for low health outcomes in key indicators. Fund will be utilised for: (i) Designing effectiveness evaluation around 2 selected outcome/impact indicators for each programme; (ii) Conducting effectiveness evaluations through sound scientific methodologies; and (iii) Dissemination of findings and recommendations and making tangible adjustments to the design of the programmes to address bottlenecks in the theory of change. **Increasing programme efficiencies:** Sustainability of the HIV, TB and Malaria programmes to some extent depends on improved efficiencies given the constrained resource environment as government fiscal space shrinks and external support is likely to flatline or even decline. Improving efficiencies will ensure that limited resources are optimized through adopting efficient interventions and service delivery models. Efficiency analysis will be carried out for selected interventions and service delivery models for Malaria, TB and HIV, prioritizing those where high costs, to identify ways of gaining cost efficiencies to optimize results. This funding request will support one efficiency study for each disease programme (HIV, TB and Malaria) and results of this studies will inform programme adjustments in year 2 and 3 of the grant as well as programmes supported by other development partners. Activities to be supported include: 1. Conduct one in-depth and comprehensive efficiency study for Malaria case management and make practical recommendations to improve efficiencies in malaria case management in the country. 2. Conduct one in-depth efficiency study on models and approaches deployed for TB case finding across all care providers covering all aspects from screening, specimen transportation, diagnostics and linking to case and notification; and identify efficiency bottlenecks as well as make practical recommendations for gaining efficiencies. 3. Conduct an in-depth and comprehensive efficiency analysis of the Different Service Delivery (DSD) for HIV treatment. The overall purpose of DSD is to increase cost efficiency in providing ART services given that this is a lifelong therapy that needs to be delivered sustainably for several years. The efficiency study will evaluate the DSD models and recommend those that have highest cost efficiency.

Priority Population(s)	• Critically ill patients will have access to quality blood products • Key and vulnerable populations for HIV, TB and Malaria
Barriers and Inequities	Overall approach to healthcare service quality improvement is undertaken by each programme with no cross learning and no overall oversight to standardize the approach to quality management. Challenges in programme performance hinders achievement of HIV, TB and Malaria outcomes and limits the impact of the investment made into these programmes.
Rationale	**Quality improvement** interventions have been selected to address the gap in standardization and institutional oversight and management of QA/QI to improve accountability. The efficiency and effectiveness analysis planned to improve **programme performance** will address the long term sustainability concerns for HIV, TB and Malaria programmes and also put the country in the path to achieving SGD 2030 health goals.
Expected Outcome	Over 80% of programmes coverage targets achieved
Expected Investment	Within allocation: US$ 2,581,539

Module 6	**RSSH: Community Systems Strengthening**
Intervention(s) & Key Activities	HIV prevention, treatment. care and support interventions to be implemented by community actors in TB, Malaria and HIV have been integrated into each module. In TB, community actors will be involved in active case finding, capacity building of community based volunteers (CBVs). other community health structures including people living with and affected by these three diseases and support for treatment adherence. In Malaria these actors will be involved in community malaria management including promoting early malaria treatment among key populations and demand creation for indoor residual spraying and correct use of long lasting insecticide mosquito nets. In HIV, the community actors will be involved in primary HIV interventions for AGYW, key populations, men, PMTCT, VMMC and condom programming by linking communities to health facilities, mobilizing communities, providing community based services as well as strenghtening those that already provide the services in the community. The community systems strengthening requested under this module will build capacity of community based actors, civil society organization networks for people living with HIV and other Community Based Organizations working with people living with HIV to deliver health services. Additionally, community systems strengthening requested under this module will specifically target Key Population organizations (KPO) in the KP Consortium that represents; MSM, FSW, Transgender and other KPO. Funding is requested to support three key interventions to strengthen community systems: **Intervention 1: Social mobilization, building community linkages and coordination** (i) Operationalize and strengthen Civil Society Self Coordinating Mechanism (CSSCM) to enhance self-coordination, information sharing and more effective advocacy and improved health service delivery. The coordination mechanism will provide a platform for community actors to plan, review their programs, build their capacity in relevant areas and enhance monitoring of the community response. CSO communication between the CSSCM, constituencies representing HIV, TB and Malaria and CCM representatives will be enhanced by designing and installing a web based communication platform. The role of the CSSCM will be to: a. Provide oversight and coordination covering all three diseases for community state and none state actors amongst them key population networks and organizations, organizations representing people living with HIV and those affected by TB and Malaria.

	b. Enhance civil society constituency communication through development of a national web-based communication platform to improve coordination, joint planning and effective linkages between communities and formal health systems, other health actors and broader movements such as human rights and women's movements. (ii) To improve integrated service delivery at community level, funds are requested to set up and operationalize Community Led Response Coordination Centres (CL-RCC) to oversee and support Community ART Access Points (CAAPs), monitor pharmocovigilance among people living with HIV accessing their ART from CAAPs, coordinate and manage other community based health interventions in all three diseases. These community centres will strengthen the interface between the community actors and health facilities. The community centres will be established in Eastern Province where currently Global Fund is supporting the CAAPs). The community centres will gather, analyze and use information on an ongoing basis to improve access to, quality and impact of services, and to hold service providers and decision makers to account (GF CSS Technical Brief) Intervention 2: Institutional capacity building, planning and leadership development: Support is requested to build capacity of CSOs registered in the CSSCM including key population networks and organizations, people living with HIV and those affected by TB and Malaria to develop a national Civil Society Engagement Strategic Plan and Action Plan. The CS Engagement Strategic Plan will develop an inclusive action plan with a well-defined community led monitoring system using a digital platform. The CS Engagement Strategic Plan will comprise of following strategic components: (i) Revamp and operationalise a selected digital platform to enable the efforts of civil society to spread awareness about all three diseases to reduce or eliminate stigma and discrimination towards PLHIV, other vulnerable populations and KPs (ii) A civil society capacity building strategy and action plan, implemented by member organisations trained with capacity to develop the strategy. (iii) A strategy and action plan for enabling social contracting in Zambia – implemented through CSSCM (iv) A national SBCC strategy and action plan – implemented by member CSOs at community level (v) A national CLM/CBM Strategy and action plan implemented by member organisations in the CL-RCCs (vi) A national community-led advocacy strategy and action plan implemented by member organisations
Priority Population(s)	General, Vulnerable and Key populations accessing primary healthcare services (HIV, TB, Malaria, SRH, MNCH, Immunization etc.) PLHIV, PLW TB/Malaria, PWIDs, PWDs, LGBTIs (any other member of the KP Consortium) Female Sex Workers and their partners and AGYW/ABYM
Barriers and Inequities	At community level, vulnerable and key populations for TB, HIV and Malaria face challenges in accessing services including stigma and discrimination, inadequate friendly services for adolescents and young people, men and key populations, discriminatory legal environment for key populations, distance to health facilities, shortage of staff especially in rural health facilities among other. Providing some of the services at community level will enhance access to services as well as provision of patient centres services.
Rationale	Despite the important role Zambian civil society plays in the national response to the three epidemics, the sector has experienced limited resource investment for community interventions and opportunities for institutional capacity building. Allowing for an enabling environment for civil society self-coordination endeavors to improve coordination, communiation and institutional capacity building which will result in delivery of quality health services at community and health facility level. Instituting CL-RCCs will provide a mechanism for community based monitoring of CAAPs at community and enhance participation of affected communities in the delivery of health services to ensure better health outcomes. A key lesson from COVID-19, HIV, cholera and other epidemics, is that

	community self-response is required for well-coordinated and managed control of these epidemics.
Expected Outcome	Percentage of districts implementing community-led monitoring increased from 68% in 2020 to 100% in 2023
Expected Investment	Within allocation: US$ 2,715,908

Module 7	**Health Sector Governance and Planning**
Intervention(s) & Key Activities	**Intervention 1: Strengthening decentralized HIV coordination –** HIV coordination structure at the decentralized level in Zambia is integrated into Local Government Authorities. This funding request will support the capacity building of these structures to standardize operations in HIV coordination structures and systems; mobilize HIV implementers to employ locally responsive HIV strategies and equip them with skills and competencies to address local HIV vulnerabilities and improve access to services. This support will focus on: • Capacity building of local government authorities and District HIV and AIDS Committees (DHACs) to effectively coordinate a multisectoral response, build partnerships within the Local Government and Council Planning Units as well as lead the mainstreaming of HIV programming across sectors. The capacity building will be based on a comprehensive capacity gap assessment and, for sustainability, partnership will be established with a local tertiary institute to provide capacity building support long term. This will be done using the District HIV Multisectoral tool kit which gives clear operational guidance on HIV/STI/TB interventions. • Development of district specific HIV strategic plans to strengthen HIV response coordination • Strengthening strategic information and knowledge management through DHACs improving utilization for HIV database and facilitating HIV coordination forums to review programmes and identify emerging priorities Funds to support national health sector planning and budgeting, including resource mapping, output based budgeting, capacity building for planning at all levels, development of national health sector strategic plans, establishing national health accounts are requested in above allocation.
Priority Population(s)	National and sub-national governance structures and health sector personnel
Barriers and Inequities	N/A
Rationale	Zambia HIV response is putting emphasis on targeting interventions based on geographical and population prioritization guided by available evidence. Programming is guided by granular data that allows implementers to identify the locations and populations most affected at local level and develop appropriate interventions. This localized response requires strong coordination of implementers to ensure resources are efficiently allocated at the local level in order to reach population left behind. The strengthening of district HIV coordination structures will support effective coordination of the localized HIV response.
Expected Outcome	Percentage of Local Authorities with integrated HIV strategic plans increased from 83% in 2020 to 100% in 2023.
Expected Investment	Within allocation US$ 174,021

Module 8	**Financial Management Systems**

Intervention(s) & Key Activities	**Intervention 1: Routine grant financial management –** Existing grant management system lacks an automated risk management and internal audit capability while the financial management software in place requires upgrading and roll out to anticipated new SRs. Financial have also not been adequately trained to enable them capture data and report efficiently. Funds are requested to strengthen the financial management systems to improve efficiency in financial data capture and reporting, risk management and overall efficiency. The number of districts in the country have increased and new districts will require installation and capacity to utilization the Navision system, new non-state (civil society) sub-recipients will also require capacity building and installation of a financial management system while the system the system for existing non-state SRs will be upgraded. Funds within allocation will be utilized to: (i) Provide technical support on Navision utilization at SR level by establishing help desks; building capacity of provincial finance teams to support district SRs to improve data capture; sustaining the system through licensing and other accessories. ICT staff will be trained on ICT related skills to support implementation of the system. SRs will also be trained on the use of additional modules of the system. (ii) To strengthen adherence to frameworks of the enterprise resource planning and management through capacity building of senior management staff at all levels on GF operations and the new Public Financial Management Act of 2018 and government guidelines; and build capacity of SRs/CBOs accountants in finance and risk management. (iii) Strengthening and sustaining existing financial management systems for Faith Based and Civil Society Organisations by upgrading the existing QuickBooks Accounting Software and installation of the systems in new SRs. (iv) Reduce and detect risk and improve financial accountability by supporting installation of risk management and internal audit software and training audit staff on its use; and supporting PR to conduct support audit and compliance management visits to SRs. (v) Assessing the capacity of SRs in financial and risk management and conducting comprehensive financial management training for SR staff. Funds are requested above allocation to further build the capacity of SRs by supporting the development and rolling out systems standards and guidelines; and procurement of advanced accessories for the Navision systems; further training of IT staff on advanced management of Navision as well as IT equipment for MOH and SRs.
Priority Population(s)	PR, SR and SSRs financial management personnel at national, provincial, district and community levels
Barriers and Inequities	n/a
Rationale	The PRs have in place the Navision system and Sun Accounting System decentralized to provincial, district and SR level through Quick Books to assist in improving timeliness, accuracy and credibility of financial reports for the Global Fund grants. However, to effectively utilize, there is a need to develop capacity of the SRs and financial team at all levels of the implementers. PRs need to have grant management software that is able to collate financial and program information for decision making while automated audit and risk management system software will ensure strengthening internal control and a risk based approach to managing risks.
Expected Outcome	90% of sub-recipient submit financial using an electronic financial systems
Expected Investment	Within allocation: US$ 2,540,118

Module 9	RSSH: Program Management
Intervention(s) & Key Activities	**Intervention 1: Grant management** The recipients of Global Fund grants will implement activities that will support activities related to coordination and management of the three national diseases control programs at central, regional and district level. Grant management of the activities will be focused on oversight, technical assistance and supervision from national to sub national levels. The activities have a direct bearing on the Global Fund's intervention in the health sector in Zambia, and promote sustainability and harmonization in financial management. Funds under intervention 1 will be requested to support: • Continuous strengthening of health finance management system through reviews and mentorship involving SR supervision and provision of technical support through trainings, onsite trainings and data capture • Regular provision of effective and independent Internal Audit reviews of financial and risk management systems. • Grant management will focus on continuation of activities supporting the overall management of Global Funds the Project Management Unit (PMU)/PR/SR levels. • PR Leadership teams at National and Provincial level will carry out technical support visits to implementing SRs and SSRs through onsite mentorship and supervision.
Priority Population(s)	PR, SR and SSRs senior staff and financial management personnel at national, provincial, district and community levels
Barriers and Inequities	N/A
Rationale	The SRs are highly involved in the implementation of the grants and attainment of expected outputs and need to be conversant with the financial management systems and regulations/guidelines to achieve value for money. The PRs have in place the Navision system, regular reviews and supervision to provincial, district and other SR level which will increase the effective management of grants. To achieve this, continuous technical support and sustainability through different support structures is need.
Expected Outcome	Percentage of utilization of disbursed funds increases to 95% by 2023
Expected Investment	Within allocation: US$ 29,660,039

a) Does any aspect of this funding request use a **Payment for Results** modality?

☐ Yes ☒ No

b) Opportunities for integration: This section outlines interventions where proposed investments address the needs of the three disease programmes and the link with broader health systems to improve disease outcomes and improve efficiencies.

1. Optmising utilization of Gene Xpert and x-rays machines: Gene Xpert will be used for multi-disease testing including HIV viral load, HPV-DNA, EID, TB and Covid-19 to increase efficiency. Each programme will procure the relevant cartridges and utilize these machines for their testing needs.
2. Human Resources for Health: 1000 nurses, 230 biomedical Equipment Technologists and 250 community health assistants will be deployed to rural areas (to address inequalities in staff deployment). These staff will be trained to provide Malaria, TB and HIV services among other primary healthcare needs.
3. Integrated sample transportation: Investment in strengthening the laboratory system include a common sample transportation system will TB, HIV, Cervical cancer programmes in addition to transporting other pathology samples. This will reduce the cost of running programme specific sample transportation.
4. Common capacity building platform: Investment in ECHO sites will to expand the number of districts that will receive training and mentorship through this platform. This will serve malaria, TB and HIV programmes to reduce the cost of training.
5. Community-led service delivery: Funds requested to strengthen community health and community systems strengthening will be used to train and support community based volunteers (those engaged by government and civil society organisations) to provide integrated services – Malaria, TB, HIV, MNCH among others.

c) Summarize how the funding request complies with the application focus requirements specified in the allocation letter.

Requirement 1: As Zambia is classified as a lower lower-middle-income country, at least 50% of allocation funding should be for disease-specific interventions for key and vulnerable populations and/or highest impact interventions within a defined epidemiological context.

<u>For HIV</u>

About 66% of the HIV funding is budgeted for treatment, care and support, which in the context of Zambia epidemiological situation, is a high impact investment given its contribution to reduction of mortality and prevention of new infections. Interventions are tailored to vulnerable and key populations including DSD models for children, men, AYPs and KPs through mentor mothers, community health posts; and management of co-morbidities.

This funding request will also scale up key pillars of primary HIV prevention interventions (AGYW and Key Populations Programmes, condom programming, VMMC and PrEP). The prevention interventions will specifically provide services to vulnerable and key populations to contribute to achievement of national targets. 27% (US$42,827,700) of HIV funds have been earmarked for prevention up from US$15,703,243 in the current grant.

The entire TB funding is supporting interventions for TB key populations which are also high impact. 54% of TB funding has been allocated to TB care and prevention interventions for TB key populations (children, men, inmates, healthcare workers and contacts of DS-TB and DR-TB index cases) to carry out intensive and active TB case finding and improve diagnostic capacity. In addition, 24% of the funds (US$6,367,802) have been allocated to screening and TB preventive therapy among PLHIV.

Requirement 2: Requests for RSSH must be primarily focused on improving overall program outcomes for key and vulnerable populations in two or more of the diseases and should be targeted to support scale-up, efficiency and alignment of interventions.

Investments in community systems and the role of community actors in direct service delivery has been enhanced in this funding request. Community platforms will deliver both HIV, TB and Malaria as well as SRH

services. KP-led organisations and networks will also be supported to provide integrated services to KPs in safe places.

Activities for strengthening the laboratory system are focused on improving the sample transportation system and quality of tests which will improve outcomes for all the three diseases. Likewise, interventions for Human Resources for Health, Procurement and Supply Chain system as well as Integrated Service Delivery are geared towards supporting the three disease programmes to achieve expected patient health outcomes.

Requirement 3: Applications must include, as appropriate, interventions that respond to human rights and gender-related barriers, inequities and vulnerabilities in access to services.

This funding request has included interventions addressing barriers to access to services. Support will be provided for (i) Recruiting Healthcare Workers to be recruited in rural areas where there is greatest shortage of health personnel; 2) Prioritising 59 districts in the country that have high HIV burden; 3) Extending Community Health Posts and sustaining Community ART Access Points as models of DSD that delivery services to PLHIV in hard to reach areas to improve adherence to treatment; 4) Involvement of all care providers (civil society and private sector) to reach TB key populations who do not seek services in the public health system; 5) Prioritising interventions for children and inmates to improve access to TB services; 6) Use of HIV KP-led organisations and peers to reach KPs in a safe place with HIV prevention services and link them to health facilities; and 7) scale up of the provision of Adolescent and Youth Friendly and Male Friendly HIV and SRH Services through development of guidelines, training HCWs and supportive supervision and assessments. These interventions will remove barriers to access to services such as stigma, negative attitudes of healthcare workers, distance to health facilities and non-availability of service.

Interventions to respond to gender and human rights related barriers are also included in this funding request. These include layered interventions under AGYW and interventions addressing gender based violence. Other interventions include the development of safety and security package for Key Populations and training of law enforcement officers, judiciary staff and healthcare workers on protection and provision of KP responsive service delivery.

d) Explain how this funding request reflects value for money, including examples of improvement in value for money compared to the current allocation period.

HIV and TB interventions with potential to increase value for money in this funding request include:

Economy

(i) **Scale up of Dolutegravir (DTG) based regimens in the country during the period of grant**. Zambia has made good progress in the transition to DTG formulations with about 362,548 PLHIV (end 2019) receiving Tenofovir disoproxil fumarate/ Lamivudine/ Dolutegravir (TLD) or Tenofovir alafenamide/ Emtricitabine/ Dolutegravir (TafED) for specific populations (e.g. children, those with kidney disease). During the period of this grant, the country will target and increase in the proportion of ART patients on DTG-based formulations (80% by the end of 2021, according to the MOH target). Importantly, DTG formulations are more tolerable to patients, who also exhibit improved viral load suppression (96% versus 87% of non-TLD patients), and reduced LTFU (from 17% of non-TLD patients to 5% of TLD patients, COP20 outbrief report). The annual cost of DTG formulations is also lower and could save around $5.5 million per year (4% of the total ARV costs) if the MOH target is reached (80% by the end of 2021).

In addition to this, economies of scale will be achieved by procuring larger TLD orders (while also reducing, or eliminating, the smaller orders of other first-line regimens which are incurring greater costs).

(ii) An improvement in treatment adherence will be targeted so as to reduce the numbers of patients failing first line treatment and requiring more expensive second or third-line regimens. Improved viral suppression of patients on TLD and TAF could save $17 million in just one year, by avoiding 9% of non-TLD patients failing first line treatment and needing second-line regimens (9% switching to SL represents approximately 90,000 patients per year. The difference in cost between first line treatment cost ($76) and second line treatment cost ($262) is $185 per patient or almost $17 million in one year. Community-based differentiated ART service delivery (DSD) models will be employed which have better treatment adherence outcomes.

(iii) This Funding Request proposes an increase in access to, and use of, self-test kits (HIVST). An economic cost analysis of door-to-door community-based distribution of HIVST kits in Zambia found a cost of

US$16.42 when including all ingredients required which is lower than the average cost across facility-based and CHW testing ($21.61) [57].

Efficiency

(i) Roll out of DSD models: Zambia aims to continue rolling out two DSD models with support of this funding request - Community Health Posts and Community Art Access Points. 400 Community Health Posts will be strategically positioned in areas with high population in urban areas and locations in rural areas where distances to health facilities are long to increase access of PLHIV to ART and other healthcare services. Community ART Access Points (CAAPs) are run by community volunteers deployed by civil society organisations. Under this grant, services provided in CAAPs will be expanded to include psychosocial support and treatment literacy as well as care for co-morbidities. Both DSD models have been proven to increase access and the scale up will reduce transport costs consequently lead to a reduction of LFTU rates.

(ii) Scale up of targeted HTS approaches: This funding request will support a scale up of combined HTS strategies – screening, index testing and HIV self-testing. Screening has been proven to identify those at risk of HIV infection and therefore assisted in targeting HTS. Index testing is also a targeted strategy that reaches those potentially exposed to HIV infection. Self-Testing is prioritised for persons who have stigma and confidentiality barriers and targets pregnant and breast-feeding women, men and clients of sex workers and key populations. These strategies have been proven to reduce the number of tests conducted while increasing yield (number of people testing HIV positive).

(iii) Targeted systematic TB screening of high risk groups: The TB component has prioritised systematic screening of high risk groups such as PLHIV, children, men, mineworkers and ex-mineworkers and inmates using all care providers, deploying volunteers, sensitizing healthcare workers and expanding diagnostics. These investments are considered high impact given the need to close the gap in finding missed people with TB.

(iv) E-DOTS and e-Adherence systems: As a key lessons from Covid-19, the TB programme has designed an innovative e-DOTs and e-Compliance system to be implemented with support from this grant to enhance adherence to TB treatment. Both systems will reduce of traditional DOTS which requires a human resources component. Using an electronic platform, healthcare workers will monitor patient adherence to treatment and patients will also report compliance. Efficiencies will be gained improved treatment completion rates while costs of administering the traditional DOTS will be reduced.

(v) An “e-Labs” system (DISALINK) has been piloted in three provinces in Zambia with an optimized courier service for specimens which improved their quality by reducing storage time (their lab rejection rate reduced from 15% to 2% of specimens), while also reducing the turn-around time for receipt of results to within six hours. This Funding Request proposes the scaling up of this system which will greatly enhance the efficiency of the viral load value chain.

2.3 Matching Funds

This section outlines how the **programmatic and financial conditions**, as outlined in the allocation letter, have been met.

The table below shows how Zambia has satisfied the financial conditions of accessing matching funds for AGYW, Condom Programming and Finding Missed People with TB programmatic areas.

Priority area	Amount	Condition(s) to access the funds	Satisfaction of conditions
Adolescent Girls and Young Women in high Prevalence Settings	US$3,800,000	**Condition:** An increase in the allocation amount designated to the relevant catalytic investment priority, compared to the budget levels in Global Fund grants from the 2017-2019 allocation period.	100% satisfaction of the condition for matching funds. US$ 22,047,345 has been budgeted for AGYW module from allocation funds. This is above US10 million allocated in current grant. Also, AGYW will benefit from funds allocated in treatment, care and support, PMTCT, HTS, PrEP and KP modules given that these modules have integrated interventions reaching AGYW

[57] Economic cost analysis of door to door community based distribution of HIV self-test kits in Malawi, Zambia and Zimbabwe. Mangenah, C. et.al., 2019

Condom Programming	US$2,500,000	**Condition:** Invest a portion of its HIV allocation that is greater than or equal to the amount of available matching funds in condom programming.	100% satisfaction of the condition for matching funds. US$3,773,066 set aside for KP module from allocated funds which is above the minimum requirement of US$2,500,000. Also key populations will be reached by interventions funded under HTS, PrEP and condom modules
Finding Missing People with TB	US$6,000,000	**Condition:** An increase in the allocation amount designated to find additional missing people with TB, compared to the budget levels in Global Fund grants from the 2017-2019 allocation period; and **Condition:** Invest a portion of its TB allocation that is greater than or equal to the amount of available matching funds in programming for Finding Missing People with TB.	Under allocation funds for the TB programme, US$ 7,475,789 have been set aside for TB case detection within allocation.

Adolescents and Young Women (AGYW) in high prevalence settings

Matching funds for AGYW priority areas have been invested in three interventions:

(i) Innovative approaches to engaging men and boys in HIV prevention: Adolescent boys and young men (ABYM), alongside AGYW, will be provided a package of defined services in youth centres. The programme will introduce HIV services in these centres to increase uptake of PrEP, HTS, Condoms, VMMC and linkage to ART initiation. Funds will be used to refurbish/set up and equip youth resource centres. Matching funds will also support DREAM-Like layering of HIV and SRH services through capacity building for 200 peer educators in 800 tertiary institutions. US$1,125,703 has been allocated to this intervention.

(ii) Innovative approaches to promoting access to HIV prevention and testing in family planning, ANC and other SRH services: Matching funds have been invested in supporting provision of a comprehensive package of HIV services to AGYW including PrEP, HTS, condoms and family planning. Matching funds will support the training of 1,600 youth peers in the delivery of HIV/SRH services in both “in and out of school” settings; outreach HIV/SRH services to AGYW in 40 districts and set up of youth friendly spaces to provide integrated AGYW health services. The youth will be engaged to provide these services alongside healthcare workers. US$ 1,827,614 has been allocated to this intervention.

(iii) Strengthening mechanisms and procedures to support multi-sectoral coordination of AGYW programme at all levels: US$1,046,173 (of which US$199,491 is from allocation funds) will be invested in strengthening AGYW programme coordination mechanisms at national, provincial and district levels. The MoH, Provincial and District Health Teams will be supported to hold Technical Working Group forums bringing all implementing partners and youth-led organisations on board to periodically review the programme, address challenges and make adjustments to overall programme strategy.

Condom Programming

Matching funds for condom programme have been allocated to two areas:

(i) Strengthening of the supply chain and last mile distribution of condoms and lubricants: Matching funds will support the establishment of community condom distribution hubs (last mile distribution) and condom outlets in social places, work places and other strategically appropriate locations; and condom distribution through peer networks and other community actors. Capacity of community actors and peer networks to be involved in condom and lubricant distribution will be built. This will enable adolescents and young people, men and key populations among others to access condoms. The matching funds in this request will specifically go to supporting the intervention activities on Strengthening of Supply Chain and last mile distribution of commodities whose total amount is $2,036,734.00.

(ii) The balance of $463,266.00 of the matching funds have been committed to demand creation which has a total budget of $995,622 to complement the within allocation on this budget. This will increase condom

and lubricant uptake, demand creation strategies responsive to the targeted populations being supported by the grant. The strategies include inter-personal communication approaches, social media and use of mass media channels. A balance between existing and new innovative strategies and between mass media campaigns and interpersonal behaviour change interventions will be used to target specific priority populations.

Investment in the two intervention areas will ensure strengthening effectiveness, enabling impact and sustainability of the condom programming and Operationalisation of the Total Market Approach.

Finding missing people with TB

Zambia is receiving catalytic funds to find the missing people with TB for the first time. The $6 million matching funds will be invested in finding missing TB cases in four provinces (Lusaka, Copperbelt, Southern and Eastern). In Lusaka, Eastern and Southern Provinces, three districts in each province have been selected while in the Copperbelt seven districts will be targeted. These 16 districts notified 22,958 TB cases in 2019, which accounted for 62% of the total national notifications and 56% of the estimated national burden of disease.

The matching funds will be catalysing the investments within allocation, which is over US$ 7,475,789 going towards finding missing people with TB. The target is to detect additional 8619 drug-sensitive TB cases and 768 drug-resistant TB every year. Over the three years, 25,857 and 2,304 additional drug-sensitive TB cases and drug-resistant TB cases respectively will be detected and treated through this investment. The investment from the matching funds for TB case finding will support:

1. **Intensified TB screen in all service points in health facilities:** TB screening at entry points including OPD, waiting rooms, admission wards, ART clinics and Reproductive and maternal child and new-born health units. A community healthcare worker will be deployed to implement triage, complete presumptive registers and educate patients. A linkage coordinator will be deployed to ensure all identified cases are notified. Matching funds will also support capacity building in case finding at facility level.
2. **Targeted active case finding at the community level**: Matching funds will support conducting door to door campaign. Community health care workers will be involved in awareness-raising prior to mass screening campaigns in the identified TB hotspots. The NTLP has procured 6 (six) one stop mobile units equipped with digital x-rays and GeneXpert to be used during these campaigns. Support will also be provided for tracing contacts both contacts of both DS TB and DRTB patients to serve as the entry for TPT.
3. **Childhood TB Case detection:** Matching funds will be used to introduce stool-based testing using Expert. Laboratory staff will be trained in the use of a stool specimen to test for TB. Capacity among health care workers will be built to increase index of TB suspicion among children and make a clinical diagnosis when TB tests results are negative. All children contacts of bacteriologically confirmed TB patients will be screened for TB. A departure from the previous approach, after community symptom screening contacts, will be invited to health facilities for a comprehensive screening that includes CXR. Children in whom TB has been excluded will be offered TPT.
4. **Improvement of data quality at all levels**. Matching funds will be used to (1) Re-orient and mentor TB coordinators and health facility staff in the recording and reporting and data management (2) conduct data validation at the facility, district, provincial levels before submission to National level (3) District TB coordinators to visit facilities at least once in a month and support private health facilities to report data to the respective districts monthly. To ensure data from these 16 districts are tracked and reported promptly, a dedicated Monitoring and evaluation officer will be identified specifically focus on coordinating data on matching funds investments.
5. **Engaging all care providers**: Of the 16 districts selected, 10 are in Lusaka and Copperbelt provinces where high volume private health facilities are situated. Private health facilities will be trained in TB screening, diagnosis, and treatment. Facilities that do not have diagnostic and treatment services will be trained to refer to patients to nearby facilities for TB diagnosis or TB treatment. Private health facilities that the capacity to diagnose and treat TB patients will be trained in TB recording and reporting.

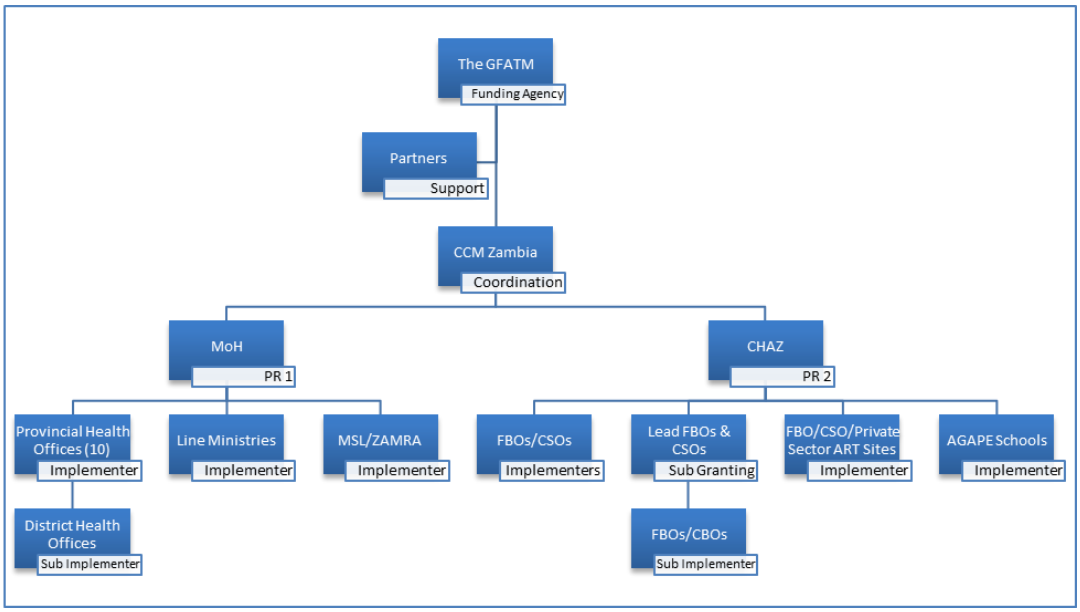
Section 3: Operationalization and Implementation Arrangements

To respond to the questions below, refer to the *Instructions* and an updated **Implementation Arrangement Map**[58].

a) Describe how the proposed **implementation arrangements** will ensure efficient program delivery.

For the 2020-2022 funding cycle, the CCM has resolved to keep the current two Principal Recipients (PRs) – MoH and CHAZ. The CCM considered the important role of MoH and CHAZ in the Zambia health system, their experience with the Global Fund grant implementation as well as their overall good grant performance. Further, the CCM did not identify any significant competency gaps in the current PRs that would justify nominating a third PR. Each PR will be guided by CCM, Zambia Public Procurement Authority (ZPPA) and Global Fund approved guidelines in the selection of sub-recipients and sub-sub recipients (SSRs).

The proposed implementation arrangements are illustrated below:



Ministry of Health

The Ministry of Health (MOH) rearranged its implementation arrangements for the Global Fund grants and selected 10 Provincial Medical Offices (PMOs) and one hundred sixteen (116) District Health Offices as Sub Recipients (SRs) for disbursement and implementation of grant-funded activities at sub national level. The rest of the districts (non-SR DHOs) benefit from Global Fund support through the PHOs which hold funds on their behalf. This strategy is critical for timely implementation of activities at district level. MOH will continue to build their capacity in all relevant functional areas (finance, programs, M&E, etc.) as well as providing regular monitoring and supportive supervision. The Ministry will increase the number of District Health Offices which will be sub-recipients after an assessment and evaluation exercise.

In addition, MOH identified the National AIDS Council (NAC), Tropical Disease Research Center (TDRC), Zambia Flying Doctor Services (ZFDS), Ndola Community Health Assistants Training School (NCHATS), ZAMSSA (formerly Medical Stores Limited), Zambia Medicines Regulatory Authority (ZAMRA) and the Department of Civil Registration as SRs to implement very specific areas of the HIV and AIDS, TB and Malaria NFM grants. These will be reviewed and reassessed before the next grant implementation.

In a quest to provide Key Populations with friendly health care services in safe spaces, the National HIV/AIDS/STI/TB Council, who is a sub-recipient of the Ministry of Health, will coordinate the key population programme including selection of the sub-sub recipients for this programme and enhance involvement of KP-led and KP friendly civil society organisations.

[58] An updated implementation arrangement map is mandatory if the program is continuing with the same PR(s). In cases where the PR is changing, the implementation arrangement map may be submitted at the grant-making stage.

In order to ensure implementation of adolescent girls and young women sexual health reproductive services, MOH competitively selected nine (9) Community Based Organizations (CBOs) to scale up (in coordination with other line ministries and departments) Comprehensive Sexuality Education (CSE) in Selected regions. A reassessment of these CBOs will be conducted to ascertain their performance to determine their future role in the implementation of CSE.

As a PR, the MOH will be fully accountable and legally responsible for the management of grant funds and for all aspects of grant implementation. The SRs selected by the MOH will implement specific grant activities relevant to their roles within the national responses to HIV, TB and malaria. All SRs will be required to provide reports on financial expenditures and programmatic results related to the implementation of the specific activities assigned to them.

Churches Health Association of Zambia

The Churches Health Association of Zambia (CHAZ) will focus on Faith-based organisation hospitals, Civil Society organisations and the Private Sector, such as the Mine hospitals. This extended reach will result in reaching out to Community based organisations as CHAZ is expected to increase number of FBO/CSO implementers under this grant from 15 to 20 with Lead SRs expected to increase from 2 to 4. This is in line with dual track financing that will ensure the joint Country response is achieved.

b) Describe the role that community-based organizations will play under the implementation arrangements.

CSOs will lead on Community Systems Strengthening interventions including the implementation of Community Based Monitoring Systems, Community-led Advocacy and Research, Social Mobilisation and Linkages and Institutional strengthening, Leadership and Capacity building. These interventions will enhance community participation in all the diseases – TB, Malaria and HIV.

For HIV grant, provision has been made in this funding request to support CSOs and community based organisations (CBOs) to delivery HIV treatment services through Community ART Access Points and the Community Led Coordination Centres (CLCCs); implementing HIV activities targeting AGYW focusing CSE, SBC and GBV; establishing AGYW safe spaces at community level, and enhancing HIV prevention among men through engaging male champions and creating demand for service. KP-led organisations and KP friendly CSOs will deliver a defined service package for KPs and link KPs to health facilities. In addition, they will address human rights barriers hindering KPs from accessing services such as stigma, violence, harassment and fear by reaching KPs in safe spaces and establishing KP peer networks. Activities to be implemented by CBOs and CSOs are included across all HIV modules.

For TB, CBOs and CSOs will play a key role in TB contact tracing as part of the index testing strategy; raise awareness on TB among high risk groups; provide psychosocial support to patients and families; support implementation of infection prevention and control at community level and generate data on community contribution to the TB response. In undertaking these activities, CBOs and CSOs will collaborate closely with the National TB Programme and will use national guidelines and tools. They will also be targeted for training and support supervision.

c) Does the funding request envisage a joint investment platform with other institutions?

☐ Yes ☒ No

d) Describe key, anticipated implementation risks and mitigation measures that address these risks, and which entity would be responsible for these mitigation measures.

Key Implementation Risks	Corresponding Mitigation Measures	Entity Responsible
COVIC 19 The impact of COVID 19 on programme implementation likely to be felt beyond 2020 • Disruption of international supply chains leading to drugs and medical supply shortages	• Making advance procurement of drugs and commodities and staggering delivery timeframes • Scale up use of ECHO platform for training and mentorship • Scale up use of community actors in referral and community based service delivery • Scale up of DSD models for service delivery	MOH

• Heavy workload with HCWs prioritizing the pandemic • Demand on lab systems affecting HIV, TB and Malaria services, • limited support supervision and mentorship due to travel restrictions among others.		
Programme Implementation Program implementation below optimal expected levels:(a) Increased Disease burden (b) Uncertainties in decision making and policy changes and high staff turnover and inadequate staffing	• GRZ/Partners Funding set aside for medical supplies • Close stakeholder involvement (2) Multisectoral approach adopted by the Ministry • Increased community outreach activities • increased prevention and awareness messages/strategies on radio and supervision • Recruitment of more health care workers/Request submitted to GF to recruit more staff/Funds set aside	MoH
Weak patient level systems feeding into HMIS leading to Gross under-reporting of TB cases	• Establish patient level recording system. • Build capacity data management, conduct quarterly data quality assessment and hold quarterly data review meetings	National TB Programme
Frequent power outages likely to lead to increased down time for the GeneXpert and microscopes	• Install alternative sources of energy	MoH - Laboratory Unit
Changes in TB normative guidelines, leading to wastage of commodities, especially drugs	• Develop an implementation plan when this arises and provide a lead time for the full transition to avoid wastage of resources	National TB Programme
Delay in supply chain storage and distribution strengthening	• Early procurement, establish early warning systems for stock management	MoH – MSL
Program Quality and M&E – Poor data quality at Health Facility level CHI/SR level due to high staff turnover of health workers	• Conduct training and mentoring through technical support visits. • Ensure that M&E plans are in place and well monitored. • Ensure consistent data verification visits. • Ensure all sites have fully approved Grant agreements -these stipulate times for reporting	CHAZ
Monitoring and Evaluation Performance framework targets not been met : Risk of low HIV and TB and Malaria data quality,(b) poor planning/plans not effectively addressing the challenges on the ground	• Continuous training and mentorship of staff/data collectors (b) Conduct routine HIV and TB and Malaria data quality checks by M&E and programme staff ©stakeholder involvement in planning.	MoH
Monitoring and Evaluation There is a risk of insufficient ICT Infrastructure capacity and degradation or loss of ICT services	• Budget for ICT infrastructure upgrades (b) initiate early procurement processes	MoH
Procurement and Supplies Increased freight and logisticts challenges a) Reduced availability of fright services b) Reduced quantities been delivered c) Escalation in transport costs/freight	• Review flexibility in terms of accepting alternative WHO approved products • Reprograming any savings and source alternative funding from partners	MoH
Procurement and supplies a) Short life supply of health products b) Increased demand for health products/Medicines	• GRZ/Partners Funding set aside for medical supplies • Reprogram and source alternative funding from partners	MoH

a) Unplanned procurements due to unanticipated needs such as variations in budgeted procurements b) Delayed procurements c) Shortages of drugs in health facilities Patient adherence to treatment will be poor HIV transmission may escalate c) Delivery of items that are different from specifications: Wrong items may be received leading to wastage of resources d) Loss of products through theft, damage, expiry and fire	• Reprogram and source alternative funding from partners • Early start of procurement processes and regular review of stock quantities • Monthly reconciliations of quantities of goods received against those ordered • Ensure proper storage procedures, secure storage facilities, insurance and robust distribution system and increased internal audit reviews Obtain weekly/monthly stock status reports from MSL indicating the expiry dates and months of stock for each of the major items of drugs/health commodities	MoH
Financial Management Failure to meet absorption targets resulting in low grant grading affecting funds allocation	• Reprogramming of funds to much critical activities	
Financial Management Grant Related Fraud and Fiduciary - Theft or loss of cash, finance documents and other physical assets etc.	• Ensure financial transactions are done through banks • Cash flow planning to avoid keeping unnecessary cash. • A well designed Asset management system that is monitored on a regular basis	
Accounting and Financial Reporting – Failure or delay to account for disbursed grants by Sub Grantees.	• Put in place Grants and Procedures Manual, Grant Agreements, Standard Terms and Conditions • Clear accountability framework. • Continuous supervision and follow ups. • Use of a risk based approach to compliance &Internal audits.	CHAZ
Grant Related Fraud and Fiduciary -Theft or loss of cash, finance documents and other physical assets etc.	• Accounts paying office has stipulated times of attending to the public/Staff. • Ensure financial transactions are done through banks • Cash flow planning to avoid keeping unnecessary cash. • A well designed Asset management system that is monitored on a regular basis	CHAZ
Political Risk - 2021 General election (Disruption of activities)	• Signed new GF Grant by 31/12/2020 • Early selection of SRs • Early disbursement of funds to SRs • Accelerated implementation of activities in quarters 1 and 2 of 2021. • Monthly follow ups through Financial and programmatic reports from the SRs	Global Fund /CHAZ/SRs
Exchange Rate Risk and high Inflation risks – Grant management and program planning challenges	• Spot changes • Shorter cash flow projections • Constant planning and review of cash flows • Consultative budget exchange rate. • Swift procurement processes	CHAZ/GF

Section 4: Co-Financing, Sustainability and Transition

4.1 Co-Financing

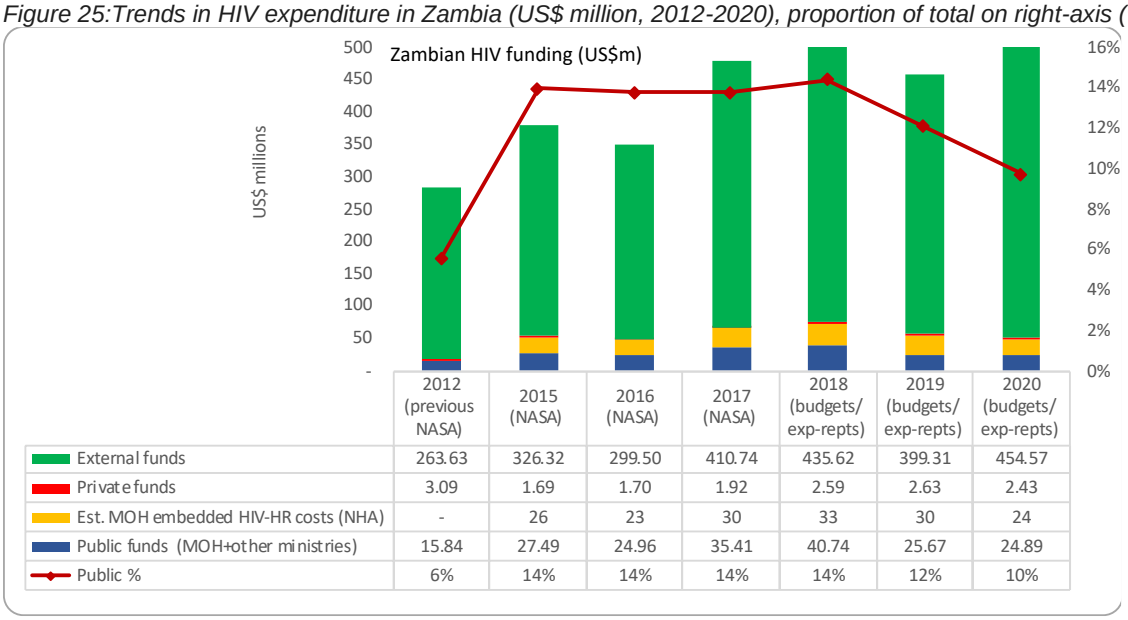
a) Have co-financing commitments for the current allocation period been realized?

☒ Yes ☐ No

If yes, attach supporting documentation demonstrating the extent to which co-financing commitments have been met.

In 2017, the NASA found that the total public contribution made up 13.8% of the total funding for HIV (NAC, 2019). However, these calculations included an estimated amount of around US$ 30 million per annum for MOH's indirect spending which supported the delivery of HIV services. These resources are embedded in the MOH primary health care budgets for integrated service delivery, and were estimated by the National Health Accounts (2016). A similar portion has been assumed for the years 2018 to 2020 (Figure 29). While it is difficult to provide evidence that these embedded costs have supported HIV services, it can be argued that without these investments, the delivery of HIV services would have been hampered.

Figure 25:Trends in HIV expenditure in Zambia (US$ million, 2012-2020), proportion of total on right-axis (%)



	2012 (previous NASA)	2015 (NASA)	2016 (NASA)	2017 (NASA)	2018 (budgets/ exp-repts)	2019 (budgets/ exp-repts)	2020 (budgets/ exp-repts)
External funds	263.63	326.32	299.50	410.74	435.62	399.31	454.57
Private funds	3.09	1.69	1.70	1.92	2.59	2.63	2.43
Est. MOH embedded HIV-HR costs (NHA)	-	26	23	30	33	30	24
Public funds (MOH+other ministries)	15.84	27.49	24.96	35.41	40.74	25.67	24.89
Public %	6%	14%	14%	14%	14%	12%	10%

Source: NASF MTR, NAC. 2020. Includes remaining GF funding for current grant for 2020, assuming 100% absorption.

Note that the 2021 commitments are shown in section C (table 6 and figure 31 below)

Figure 28 shows that, when including the estimated MOH indirect (embedded) costs for HIV, and the direct HIV budgets of MOH and other ministries, then the Zambian government has spent US$73.8m, US$55.7m, and US$48.9m in 2018, 2019 and 2020 respectively. However, excluding the estimated MOH indirect costs, the total public (direct HIV) contributions drop to US$40.7m, $25.7m and $24.9m (2018-2020), noting that at the beginning of 2020, at the time of budgeting, the public ZMW allocations were worth $34.7m (at an exchange rate of 15:1, but which have devalued with the exchange rate of 18:1).

Consequently, since 2018, the public proportional contribution to total HIV spending has steadily reduced from 14% to 10% in 2020 – in US$ terms - when including the indirect MOH HIV spending, while the direct HIV spending alone only made up 5% of the total in 2020. These reductions are mostly due to the devaluing Zambian Kwacha, versus the US dollar (Table x). Despite a dip in 2019 budget, the average increase in ZMW over the period (2018-202) was 13% annually, but in US$ this reflects as an annual average reduction of 8% - highlighting the challenge of devaluing local currency.

Additionally, the total health budget has equally constricted in US$ terms, with an annual average reduction of 16% over the period, but in Kwacha terms, experienced an annual average increase of 10% (Table x). Nevertheless, the health budget share of total government expenditure declined from 10% in 2018 to 8% in 2020.

Table 4: Trends in Public HIV expenditure in Zambia (ZMWm, US$m, 2017-2020)

GoZ HIV funding from domestic revenue	HIV-specific public funds (ZMWm)	HIV-specific public funds (US$m)	Annual %change in ZMW	Annual %change in US$	ZMW:US$ Ex.Rate (ann.av)
2017 (NASA)	337.60	35.4			9.53
2018 (budgets/ exp-repts)	426.75	40.7	26%	15%	10.48
2019 (budgets/ exp-repts)	331.58	25.7	-22%	-37%	12.92
2020 (budgets/ exp-repts)	448.03	24.9	35%	-3%	18.00
	Annual average change ('18-20)		13%	-8%	

Source: RNASF, NAC. 2020. MOH 2020 budget provided by MOH, as per Table 6 below. Note that 2020 exchange rate average for Jan-April, 2020, was 15.2, which subsequently increased to 18:1. These figures include MOH, MOHA, MOD, OP and other ministries' HIV wellness programmes. TB treatment funding is excluded, but TB PT funding for PLHIV is included.

Additionally, the total health budget *increased in Kwacha terms,* with an annual average increase of 10% (Table 5) – but in US$ amounts, this reflects as an annual average reduction of 16% over the period. However, the health budget share of total government expenditure declined from 10% in 2018 to 8% in 2020.

For this reason, the Zambian government has struggled to meet the co-financing requirements when considering their contributions in only US$ (2018) terms, when these amounts were set. But if one adjusts for the fluctuating US$:ZMW exchange rate, then the Zambian government has surpassed these amounts, when including the MOH estimated indirect costs, with all the direct HIV spending.

Table 5: Zambian public health budgets (ZMW, US$, 2018-2020)

Zambian Health Budget / Total Govt Expenditure	2018 Authorised	2019 Authorised	2020 Budget
TOTAL HEALTH BUDGETS - PUBLIC REVENUE ZMW	7 144 242 610	7 749 986 567	8 662 098 274
TOTAL HEALTH BUDGETS - PUBLIC REVENUE US$	**$ 682 027 934**	**$ 600 076 389**	**$ 481 227 682**
Total Govt Expenditure ZMW	71 672 105 907	86 807 894 727	106 007 612 236
Total Govt Expenditure US$	$ 6 842 205 815	$ 6 721 478 492	$ 5 889 311 791
Health as a share of total Government Expenditure	**10%**	**9%**	**8%**
Annual rate of increase in Health Budgets in ZMW		8%	12%
Annual rate of increase in Health Budgets in US$		-12%	-20%
ZMW: US$ ExRates	**10.48**	**12.92**	**18.00**

Source: Zambian Estimates of Expenditure (Yellow Book), 2020.

b) Do co-financing commitments for the next allocation period meet minimum requirements to fully access the co-financing incentive?

☒ Yes ☐ No

If details on commitments are available, attach supporting documentation demonstrating the extent to which co-financing commitments have been made.

Refer to Table 6 below which presents the GOZ's budgeted amounts for HIV, including MOH and other ministries intended HIV spending. These amounts are estimates, based on the 2020 public allocations (National Estimates of Expenditure 2020 and MOH detailed budget), and assume the amounts have flatlined in US$ amounts, *which is optimistic given the devaluing Kwacha.* Assuming a 5% increase in Kwacha amounts would equate to a declining amount in US$, as was seen in the previous years (refer to table 4 above), and a more likely scenario (based on past trends).

Also noting the declining share of total public expenditure being allocated to health (from 10% in 2017 to 8% in 2020), and the COVID demands, the total available pie is shrinking, and hence the MOH commitments to HIV may be similarly constrained.

c) Summarize the programmatic areas to be supported by domestic co-financing in the next allocation period.

Based on the public budgets for HIV in 2020, Table 6 indicates the anticipated (flatlined in US$) public budgets for HIV for the period 2021-2023, assuming with similar programmatic foci. The table includes MOH, and other ministries' HIV budgets.

Table 6: Anticipated public budgets for HIV

Public HIV Budgets (US$ 1:18 ZMW)	2021	2022	2023
Treatment ART	14 790 101	14 790 101	14 790 101
Treatment labs/VL	5 000 000	5 000 000	5 000 000
TB/HIV co-infection (mostly TPT)	15 533	15 533	15 533
HIV testing services	12 199	12 199	12 199
PREV: VMMC	27 862	27 862	27 862
STI estimated (as 90% of need)	4 089 327	4 089 327	4 089 327
PEP estimated (as 90% of need)	13 921	13 921	13 921
Workplace wellness programmes (other Mins)	204 562	204 562	204 562
OVC Support (Office of President)	30 036	30 036	30 036
Planning, PM & Coord	706 971	706 971	706 971
Total public HIV budgets (US$)	**24 890 511**	**24 890 511**	**24 890 511**

Source: RN RNASF, NAC 2020. Public budgets are based on 2020 budgets, converted from Kwacha to USD at 18:1 and assumed to flatline for 2021-2023 in US$ terms. Including MOH, MOHA, MOD, OP HIV budgets. Estimated MOH HIV indirect costs = NHA (2016): 5% of total health budget, assumed same for all years.ASF, NAC 2020. Public budgets are based on 2020 budgets, converted from Kwacha to USD at 18:1 and assumed to flatline for 2021-2023.

d) Specify how co-financing commitments will be tracked and reported.

The MOH conducts National Health Accounts every couple of years which provides the total health spending in the country, and attributes portions to specific diseases, including HIV. Additionally, NAC undertakes National AIDS Spending Assessments (NASA) occasionally (the most recent being 2015-2017). The NASA reports provide the details of HIV spending according to the NASF priorities. These two systems will be used to track co-financing commitments.

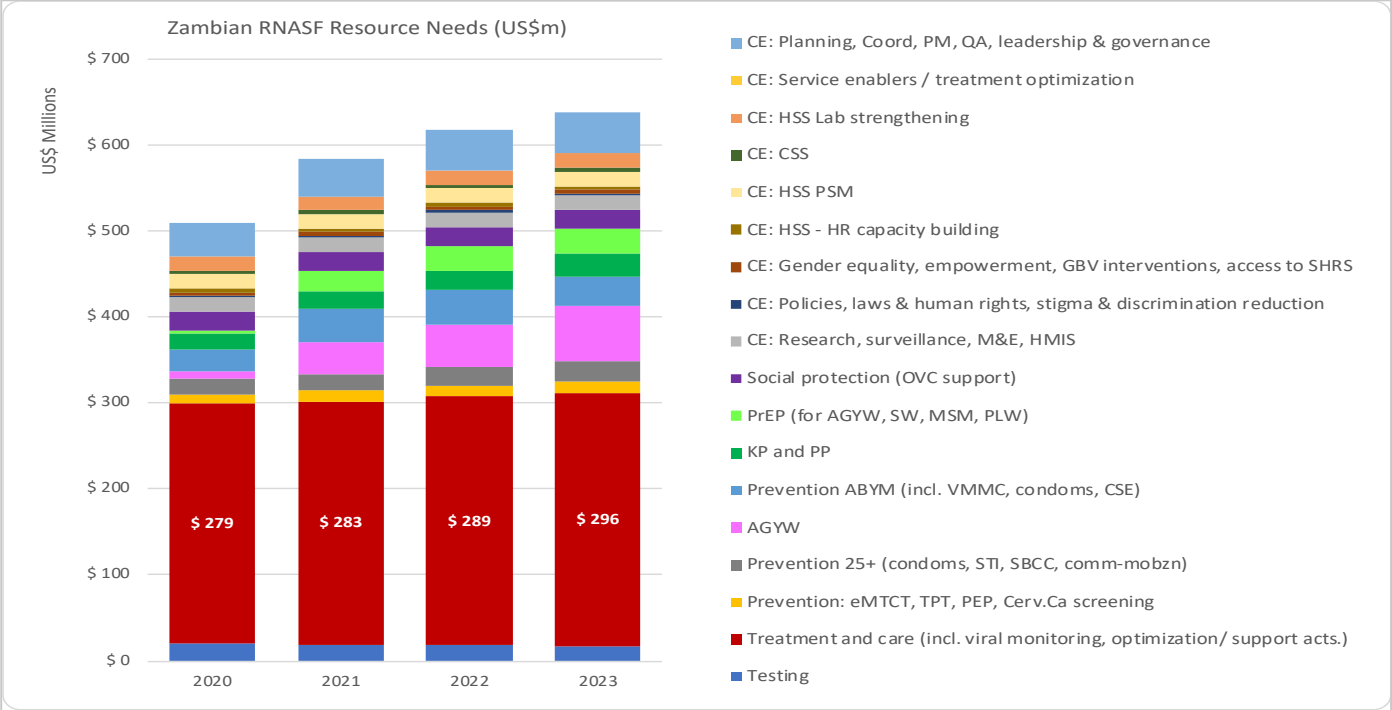
4.2 Sustainability and Transition

a) Based on the analysis in the Funding Landscape Table(s), describe the funding need and anticipated funding, highlighting gaps for major program areas in the next allocation period.

The revised NASF (RNASF, 2020-2023) included a detailed costing and funding mapping, estimating the anticipate gaps per programme area, as shown in the Funding Landscape tables (refer to the full RNASF document for details).

In total terms, the estimated RNASF cost for 2020, with the coverage targets anticipated for the remaining period of this year, will be in the order of United States dollars $510 million, representing an increase of 12% from 2019 total spending for the NASF ($457 million), according to the MTR review process. It is expected that all of this resource need in 2021 will be mostly covered by the available funding (assuming all the remaining GF funds of the current grant will be fully absorbed). The total resource need increases to $585 million in 2021 (representing a 15% annual increase from 2020), $617 million in 2022 (6% increase), and could reach $639 million by 2023 (3% increase), in nominal terms (Figure29). These increases are mainly driven by the national scale-up plan of the package of services for AGYW and for PrEP (targeted at AGYW, sex workers, MSM and pregnant and lactating women). The PrEP costs could thus increase by six-fold from around $4 million in 2020, to $25 million in 2021 and reaching $29 million in 2022 and 2023. Despite PEPFAR's COP20 allocation for PrEP in 2021 dramatically increasing to $16 million, there remains a potential funding shortfall of $8 million in 2021. Additionally, if the interventions for key populations, including sex workers, MSM and PWID, as well as for other priority populations, such as inmates, are scaled up as planned, their resource need could reach up to $26 million by 2023. Please refer to the RNASF (NAC, 2020) for full details.

Figure 26: Estimated resources needed for the RNASF interventions (US$m, 2020-2023)

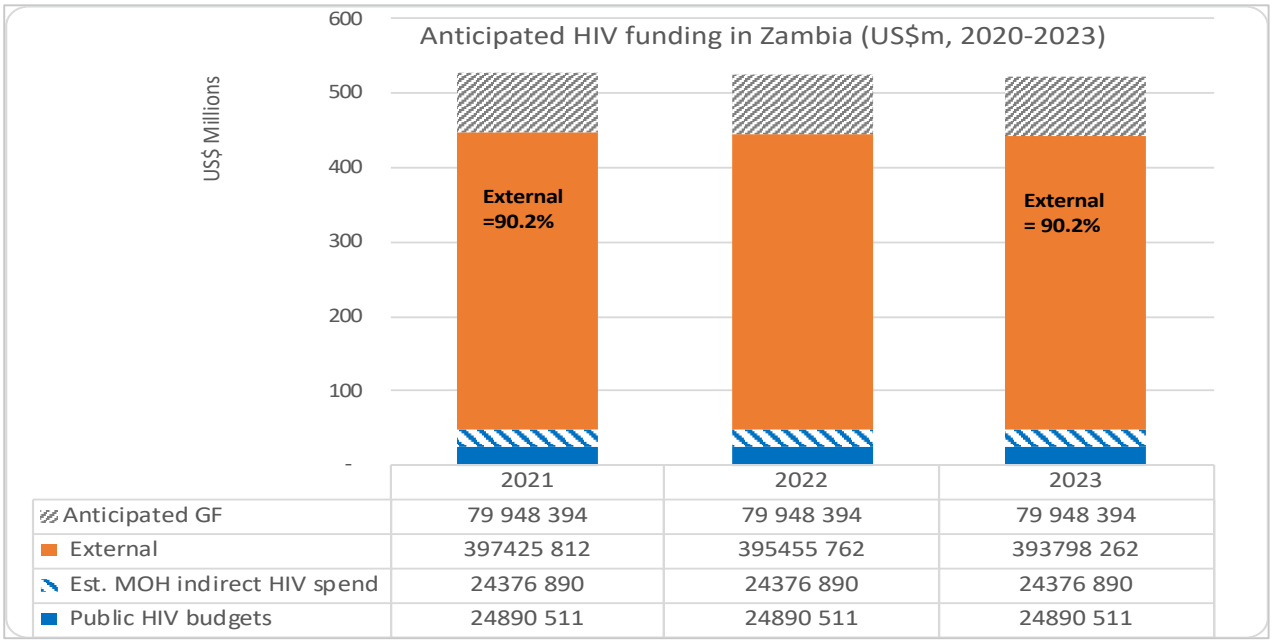


Abbreviations: TPT: TB prevention therapy. Cerv.Ca; cervical cancer. Comm-mobzn: community mobilization. PLW: pregnant & lactating women. CE: critical enablers. HSS: health systems strengthening. CSS: community systems strengthening. HR: human resources. PSM: procurement & supply chain management. PM: programme management. QA: quality assurance.

Other interventions aimed at PLHIV, including eMTCT, TPT, PEP, cervical cancer screening, could make up 2% of RNASF costs at around $12 million per annum, while prevention interventions aimed at the general population, including condoms, SBCC, STI prevention and treatment, and community mobilisation, awareness raising and demand creation, would take 4% (around $20 million and reaching $24 million by 2023, of which half would be for condoms). Social protection, mostly OVC support, could cost around $22 million per year (4% of total costs). Critical enablers (social, system, and service enablers) could require just over $100 million per annum (18% of the total costs), and these include: community systems strengthening, health systems strengthening (PSM, labs, human resources), policies, human rights, stigma reduction, gender empowerment, reduction of gender based violence, improving access to SRH services, as well as co-ordination, programme management, leadership, governance, quality assurance – the latter bucket taking an estimated 8%. These investments are considered essential to enhance and support the achievement of the RNASF goals.

The RNASF rapid mapping of future resources, anticipated that in the 2021, available funding could reach around $529 million, assuming the full GF within allocation amount for HIV and the catalytic funds for HIV are secured, and assuming an even split over the grant period. Going forwards (2022-2023), PEPFAR contributions were assumed to remain at the same level as indicated in COP20 (for FY21), and hence the available funding remains more or less at the same level in the outer two years (Figure 31). However, this is assumption is highly uncertain, given the global economic crisis worsened by the COVID pandemic.

Figure 27: Anticipated funding for the HIV response (US$m, 2020-2023)

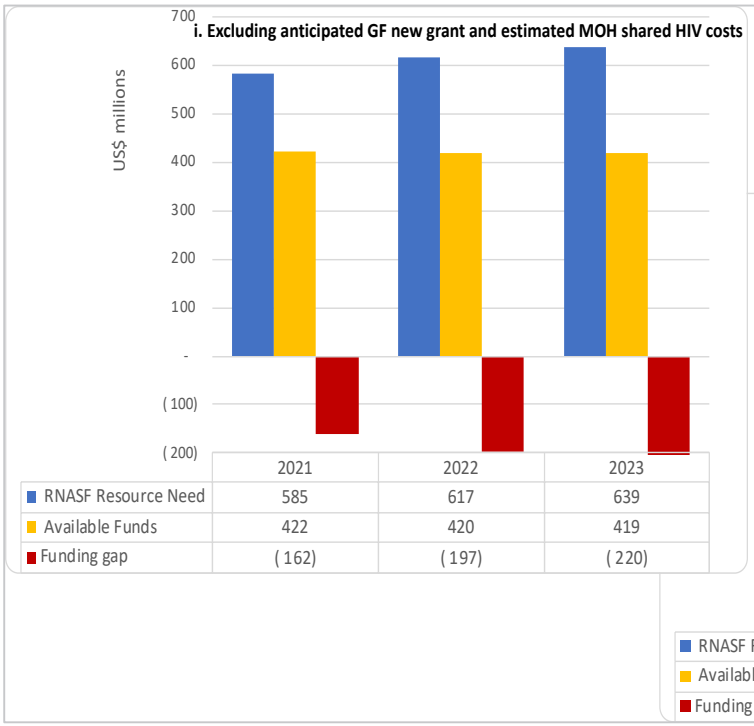


	2021	2022	2023
Anticipated GF	79 948 394	79 948 394	79 948 394
External	397425 812	395455 762	393798 262
Est. MOH indirect HIV spend	24376 890	24376 890	24376 890
Public HIV budgets	24890 511	24890 511	24890 511

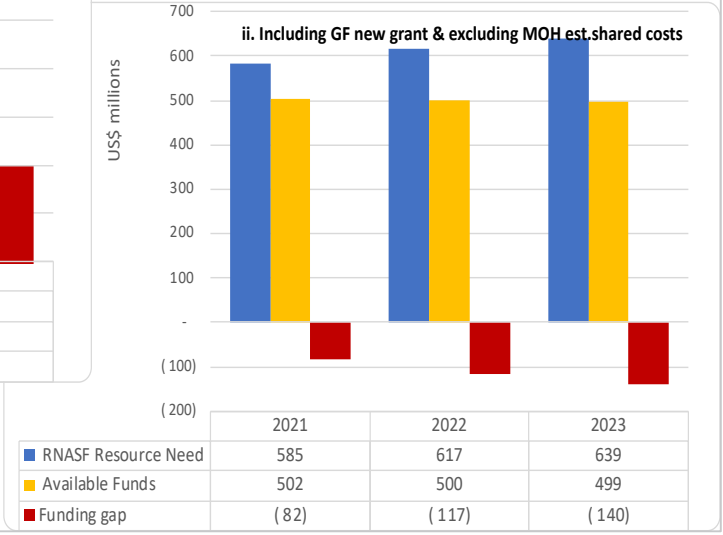
Source: RNASF, NAC 2020. External sources include: PEPFAR, GIZ, UN Agencies, BMGF, DFID, ELMA, CIFF, CRS, Boston Univ. and CHAI. USG = COP20 for FY21 and assumed to flatline for 2022-2023. UN Agencies assumed to maintain similar levels of funding per year (as their 2020 budget). Public sources include the direct HIV budgets plus the estimated indirect MOH costs for integrated service delivery (which cannot be proven as benefitting HIV services but are critical enablers). Public budgets are based on 2020 budgets, converted from Kwacha to USD at 18:1 and assumed to flatline for 2021-2023.

Comparing available funding for the RNASF against the estimated resources needed, but excluding the estimated MOH indirect shared costs, Figure 32i (excluding the anticipated GF funds) indicates the estimated overall potential funding gap being $162 million in 2021 and increasing to a possible $197 million and $220 million in 2022 and 2023, respectively. Figure 32ii (including the anticipated GF funds), reduces the overall funding gap to $82 million in 2021 and increasing to a possible $117 million and $140 million in 2022 and 2023, respectively.

Figure 28: RNASF available HIV funds (total) versus resources needed and potential funding gap (US$m, 2021-2023), excluding and including new GF grant



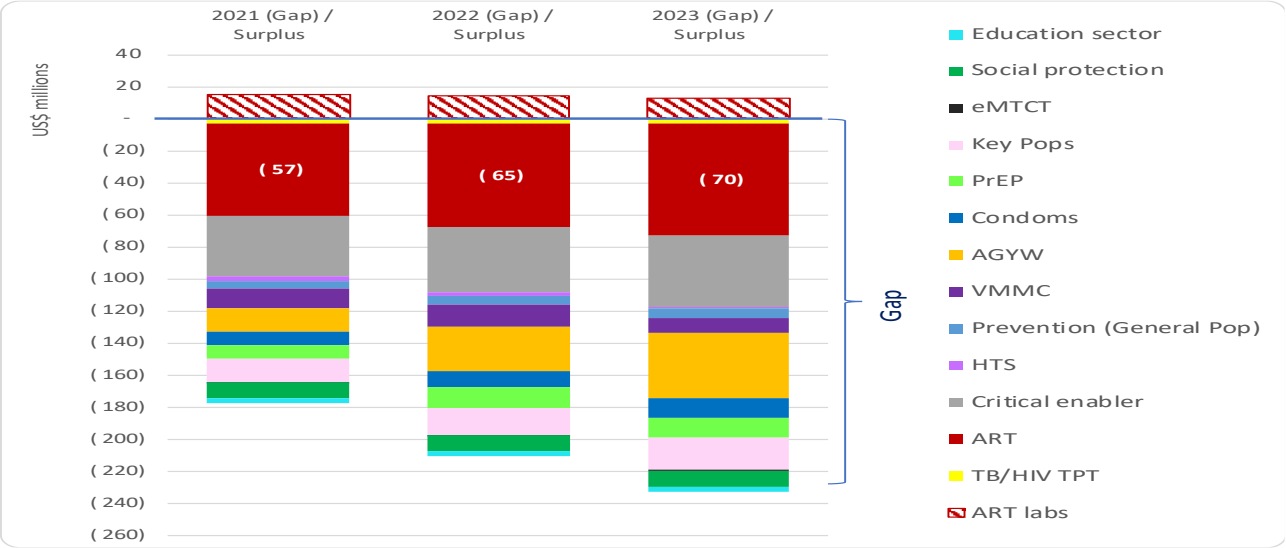
	2021	2022	2023
RNASF Resource Need	585	617	639
Available Funds	422	420	419
Funding gap	(162)	(197)	(220)



	2021	2022	2023
RNASF Resource Need	585	617	639
Available Funds	502	500	499
Funding gap	(82)	(117)	(140)

These figures show the potentially significant and growing funding gap for the Zambian HIV response, while the figure 33 shows which interventions, in particular, could face funding shortfalls, undermining the intended impact of the RNASF with its ambitious targets – noting that figure x excludes the potential new GF amounts. The ART programme could face the largest funding gap, of around $57 million in 2021, followed by critical enablers ($38 million for all CE's) – noting that these are particularly difficult to cost and could consume an unlimited amount of funding. The next three key programmes most likely to be affected by funding shortfalls, in the order of $15 million each, are: key and vulnerable populations, AGYW interventions, and VMMC, but with AGYW's gap almost doubling in 2022 ($27 million) and again in 2023 (to $41 million) due to the enthusiastic national scale-up targets. Both the PrEP and condoms (with lubricants) programmes could face funding gaps of $8 million each in 2021. These five programmes represent the five pillars of prevention, and Zambia's efforts at reducing new infections could be seriously undermined if these shortfalls materialise.

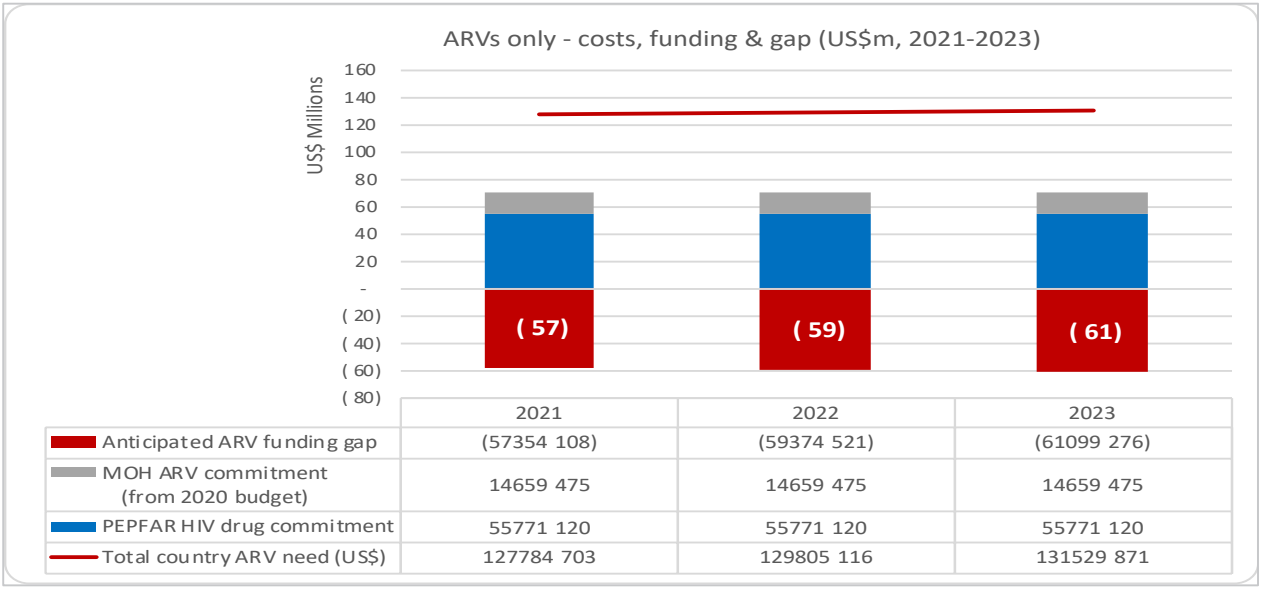
Figure 29: The summed funding gaps/ surplus per intervention (US$m, 2020-2023), excluding new GF grant



Note: The estimation of resources needed for laboratory monitoring included only viral load tests and their service delivery costs. It did not take into account all other test requirements for ART patients and is therefore lower than the available funding, which appears to be matching the full laboratory need.

Examining specifically the ARV costs and committed PEPFAR and MOH funding, Figure 34 shows the possible ARV funding shortfall of US$57 million in 2021, $59 million in 2022 and reaching US$61 million in 2023 – this has been calculated assuming that the MOH target of 80% of patients will have transitioned to DTG-formulations by the end of 2021.If this transition can occur quicker, there may be further cost-savings.

Figure 30: ARVs available funding and potential funding gap (US$m, 2020-2023)

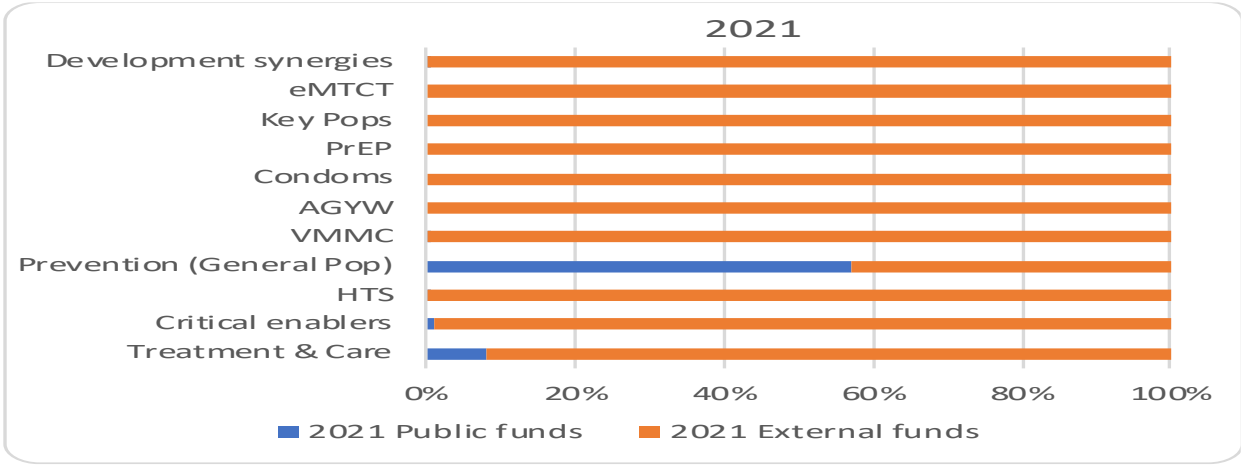


	2021	2022	2023
Anticipated ARV funding gap	(57354 108)	(59374 521)	(61099 276)
MOH ARV commitment (from 2020 budget)	14659 475	14659 475	14659 475
PEPFAR HIV drug commitment	55771 120	55771 120	55771 120
Total country ARV need (US$)	127784 703	129805 116	131529 871

Note: the estimated numbers of PLHIV requiring ART were based on Spectrum estimates (April, 2020), and the current MOH PMU's procurement prices, including PSM fees, were applied.

The overall dependency on external aid for the key HIV programmes in Zambia (Figure 35) makes them extremely vulnerable to global economic shocks (such as COVID-19), and requires additional efforts to mobilise domestic resources, while also making more efficient use of available funding. The NASF Mid-Term review and the RNASF refer to areas of potential efficiency gains that the GOB will make efforts to achieve – such as savings through more targeted HIV testing, index partner testing, differentiated service delivery models for ART and HTS, and faster transition to DTG formulations. Refer to the RNASF (NAC, 2020), section 7.7 for more details.

Figure 31: Sources of funding for the RNASF programme areas (%, 2021)



Note that this figure does not show the scale of funding for each area – the nominal public amounts for general population prevention are very small compared to those for treatment and care.

The GOZ is explored innovative funding options, which were found to have high costs to set up and manage with little returns, as well as social contracting and other avenues. The National Health Insurance (NHI) Scheme could be a potential funding source, although the minimum benefits package does not appear to include HIV treatment services – possibly due to their potential to crowd out the available funding for other diseases. The country could re-examine the NHI as a possible funding source for HIV treatment services. The challenges to raising domestic revenue for HIV are discussed in the next section.

Highlight challenges related to sustainability. Explain how these challenges will be addressed either through this funding request or other means.

The macro-economic outlook for Zambia has been badly affected by COVID-19 and the devaluing Zambian Kwacha (by 24% so far in 2020), and hence previous hopes for 3.2% GDP growth (MOF, Budget Speech 2020) will likely be revised downwards. The inflation trends indicate an increase from 12.5% in January 2020 to 16.6% in June 2020, the highest rate since 2016 (Trading Economics, 2020). Reducing inflation may be a possibility if the economy rebounds post-COVID, but is difficult to predict. Given Zambia's high debt as a ratio of GDP and fiscal account balance, it is highly unlikely that Zambia will have any fiscal space to increase our public allocation to health, and even if possible, HIV services will be competing against the demands that COVID-19 is putting on the health care system. The Kwacha is anticipated to further devalue to 18.94 by mid-2021.

Even if the 2020 public HIV budget amounts might be increased by 5% in Kwacha terms, the increases would hardly cover the anticipated currency devaluation. In an optimistic scenario, with no reduction in the public budgets in USD amounts, the direct HIV public funding could flatline at around $25m per annum, and the estimated MOH indirect contributions could be $24m per annum. Considering these together, the public funds for HIV could maintain at $49m per annum – assuming their budgets are not reduced and that the ZMW:USD exchange rate remains at 18:1. Given the COVID-19 impact as well as the global recession effect on Zambia's economy, it is highly unlikely that these factors would have a favourable effect on the ability to achieve sustainability.

Also please refer to the RNASF (2020, section 7.6), which gives an up-to-date brief summary of the economic outlook for Zambia, given the COID-19 pandemic and global and domestic economic crisis, and notes the impact of inflation and the devaluing local currency. The evidence implies that Zambia does not have the fiscal space to increase its health and HIV investments, in USD terms. Hence, in 2020, the HIV response in Zambia is 90-95% reliant on external aid, and this is unlikely to change in the foreseeable future.

Annex 1: Documents Checklist

Use the list below to verify the completeness of your application package.

☒	Funding Request Form
☒	Programmatic Gap Table(s)
☒	Funding Landscape Table(s)
☒	Performance Framework
☒	Budget
☒	Prioritized above allocation request (PAAR)
☐	Implementation Arrangement Map(s)[59]
☒	Essential Data Table(s) (updated)
☒	CCM Endorsement of Funding Request
☒	CCM Statement of Compliance
☐	Supporting documentation to confirm meeting co-financing requirements for current allocation period
☒	Supporting documentation for co-financing commitments for next allocation period
☐	Transition Readiness Assessment (if available)
☒	National Strategic Plans (Health Sector and Disease specific)
☒	All supporting documentation referenced in the funding request
☐	Health Product Management Tool (if applicable)
☐	List of Abbreviations and Annexes

[59] An updated implementation arrangement map is mandatory if the program is continuing with the same PR(s). In cases where the PR is changing, the implementation arrangement map may be submitted at the grant-making stage.